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**Master Negative
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PSt SNPaAg230

CONTENTS OF REEL 230

- 1) Pennsylvania Dept. of Agriculture**
Handbook of Pennsylvania standards for grading and marketing
fruits and vegetables
MNS# PSt SNPaAg230.1

- 2) Morfit, Campbell**
Manures, their composition, preparation, and action upon soils
MNS# PSt SNPaAg230.2

- 3) Youatt, William**
The horse
MNS# PSt SNPaAg230.3

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- 4) McCain, George Nox**
War rations for Pennsylvanians
MNS# PSt SNPaAg230.4

- 5) Pack, Charles Lathrop**
The war garden victorious
MNS# PSt SNPaAg230.5

Author: Pennsylvania Dept. of Agriculture

**Title: Handbook of Pennsylvania standards for grading
and marketing fruits and vegetables**

Place of Publication: Harrisburg, Pa.?

Copyright Date: 1944

Master Negative Storage Number: MNS# PSt SNPaAg230.1

<977830> *OCLC* Form:mono 2 Input:LEF Edit:FMD

008 ENT: 981209 TYP: s DT1: 1944 DT2: LAN: eng

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090 10 631.18 \$bP38h \$cax*6399023

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260 [Harrisburg, Pa.?] \$bCommonwealth of Pennsylvania Dept. of Agriculture \$c1944.

300 115 p. \$c18 x 10 cm.

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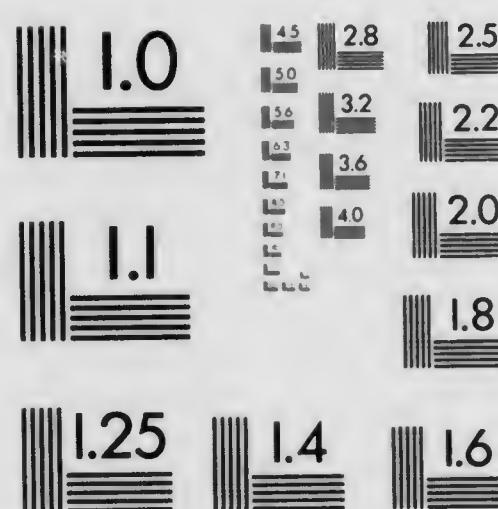
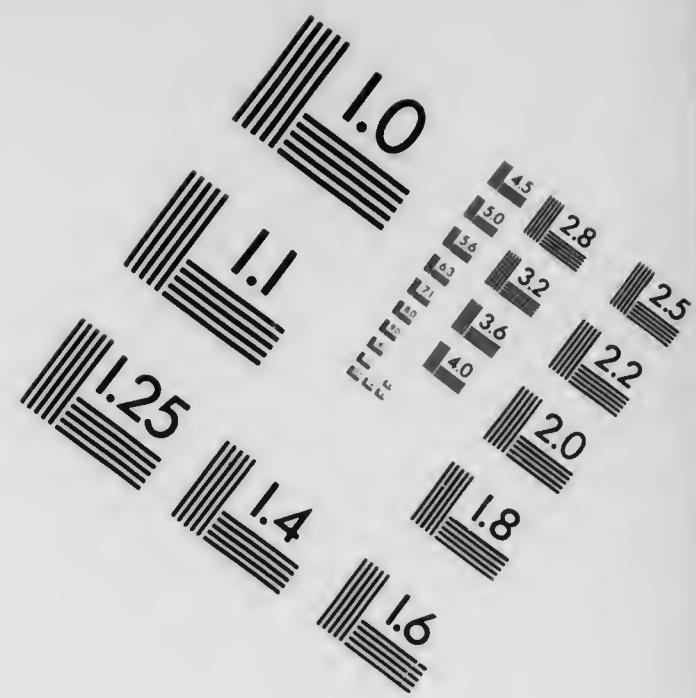
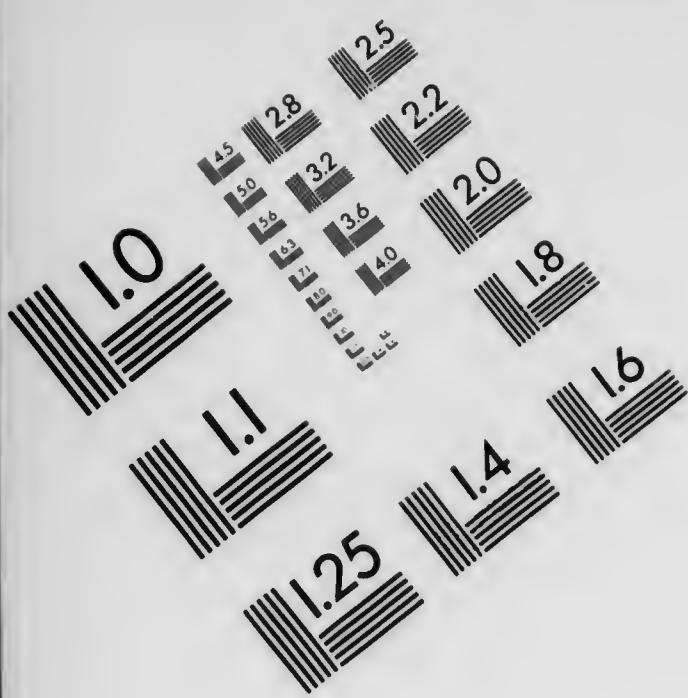
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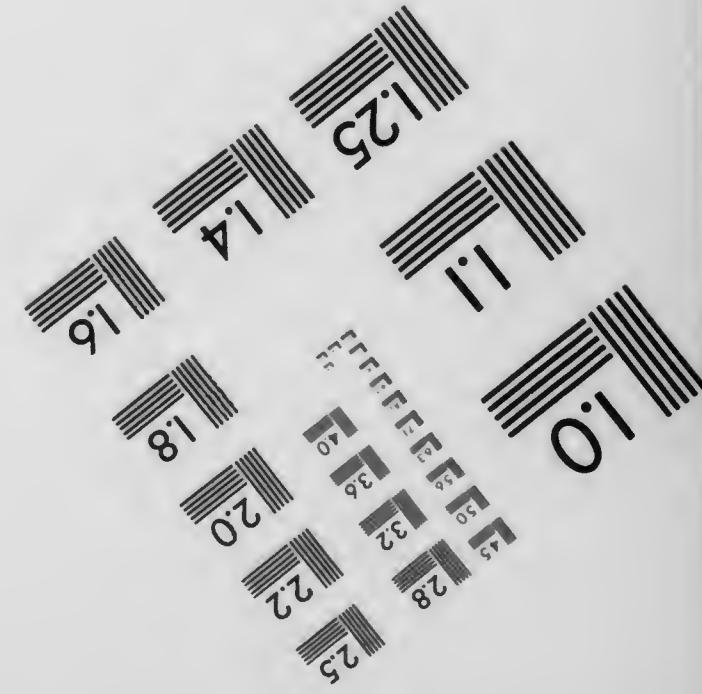
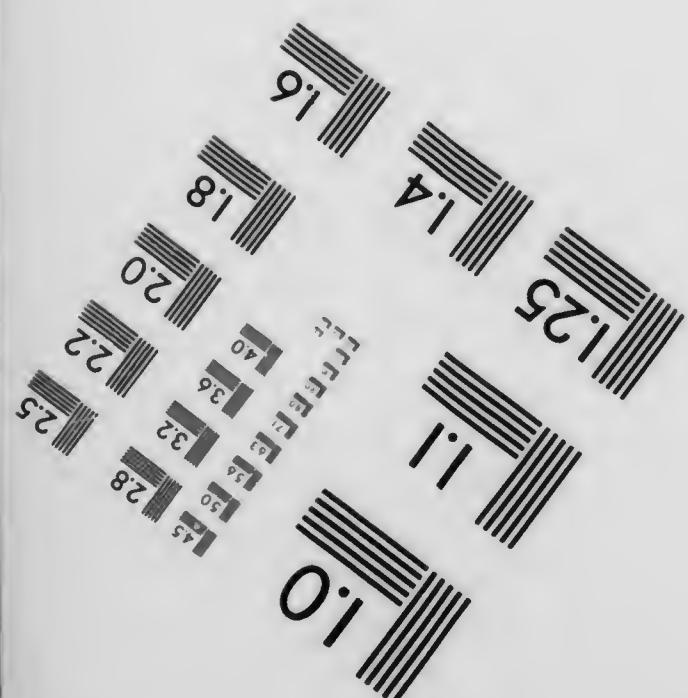
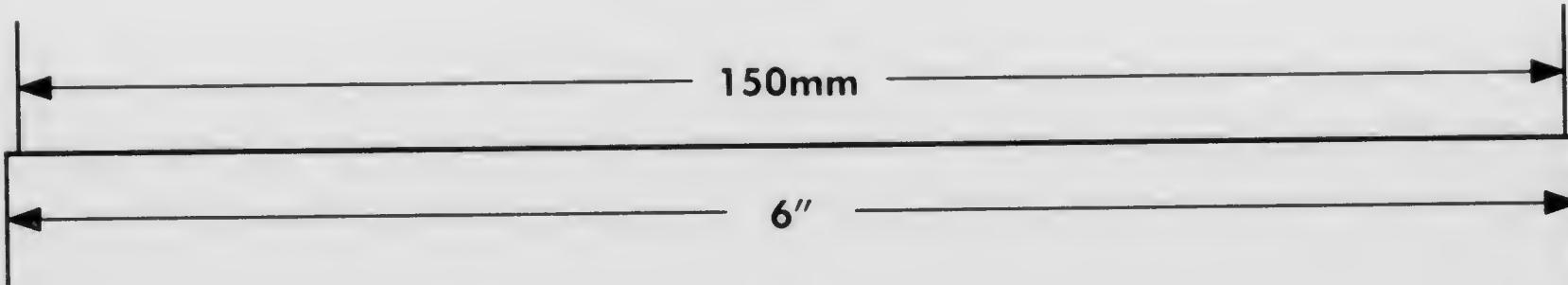
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**Handbook of
Pennsylvania Standards
for
GRADING AND MARKETING
FRUITS AND VEGETABLES**



B631.18
P38h

Commonwealth of Pennsylvania
DEPARTMENT OF AGRICULTURE
MILES HORST, SECRETARY

1944



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for
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FRUITS AND VEGETABLES**



Commonwealth of Pennsylvania
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1944

P363.118
P326

**Pennsylvania Standards for
GRADING AND MARKETING
Fruits and Vegetables**

STANDARD GRADES FOR APPLES
(Revised October, 1939)

U. S. Fancy shall consist of apples of one variety which are mature (1)* but not overripe (2), carefully handpicked (3), clean (4), fairly well formed (5), free from decay, internal browning, internal breakdown, scald, freezing injury, broken skins, and bruises (except those incident to proper handling and packing), and visible watercore. The apples shall also be free from damage (7) caused by russetting (7a), sunburn (7b), sprayburn (7b), limbrubs (7c), hail (7d), drought spot (7d), scars (7d), disease (7e), insects (7f), or mechanical or other means (7). Each apple of this grade shall have the amount of color specified hereinafter for the variety.

U. S. No. 1. The requirements for this grade are the same as U. S. Fancy except that less color is required for all varieties except yellow and green varieties for which the requirements for both grades are the same. Apples of this grade shall be of one variety, mature (1) but not overripe (2), carefully handpicked (3), clean (4), fairly well formed (5), free from decay, internal browning, internal breakdown, scald, freezing injury, broken skins and bruises (except those incident to proper handling and packing), and visible watercore. The apples shall also be free from damage (7) caused by russetting (7a), sunburn (7b), sprayburn (7b), limbrubs (7c), hail (7d), drought spot (7d), scars (7d), disease (7e), insects (7f), or mechanical or other means (7). Each apple of this grade shall have the amount of color specified hereinafter for the variety.

U. S. Commercial shall consist of apples of one variety which meet the requirements of U. S. No. 1 except as to color. This grade is provided for apples which are mature but which do not have sufficient color to meet the specifications of U. S. No. 1.

U. S. No. 1 Early shall consist of apples of one variety which meet the requirements of U. S. No. 1 except as to color and maturity. Apples of this grade may have no red color and need not be mature. This

*See "Definitions of Terms."



grade is provided for early varieties only, such as Oldenburg (Duchess of Oldenburg), Gravenstein, Lowland, Raspberry (Liveland Raspberry), Red June, Summer Hagloe, Twenty Ounce, Wealthy, Williams, Bailey Sweet, Bietigheimer and other varieties which ripen at the same period and which are often used for cooking rather than for eating out of hand.

U. S. Utility shall consist of apples of one variety which are mature (1) but not overripe (2), carefully handpicked (3), not seriously deformed (6); free from decay, internal browning, internal breakdown, scald, freezing injury. The apples shall also be free from serious damage (8) caused by dirt or other foreign matter, broken skins, bruises, russetting (8a), sunburn (8b), sprayburn (8b), limbrubs (8c), hail (8d), drought spot (8d), scars (8d), visible watercore (8e), disease (8f), insects (8g), or mechanical or other means (8).

U. S. Utility Early shall consist of apples of one variety which meet the requirements of U. S. Utility except as to maturity. Apples of this grade need not be mature. This grade is provided for early varieties only, such as Oldenburg (Duchess of Oldenburg), Gravenstein, Lowland Raspberry (Liveland Raspberry), Red June, Summer Hagloe, Twenty Ounce, Wealthy, Williams, Bailey Sweet, Bietigheimer and other varieties which ripen at the same period and which are often used for cooking rather than for eating out of hand.

Combination Grades. Combinations of the above grades may also be used as follows:

Combination U. S. Fancy and U. S. No. 1.
Combination U. S. No. 1 and U. S. Commercial.
Combination U. S. No. 1 and U. S. Utility.
Combinations other than these are not provided for in connection with the United States apple grades. When combination grades are packed, at least 50 per cent of the apples in any container shall meet the requirements of the higher grade in the combination.

U. S. Hail Grade shall consist of apples which meet the requirements of U. S. No. 1 except that hail marks where the skin has not been broken and well healed hail marks where the skin has been broken shall be permitted; provided the apples are fairly well formed.

Unclassified shall consist of apples which are not graded in conformity with any of the foregoing grades.

Color

In addition to the foregoing requirements for U. S. Fancy and U. S. No. 1, each apple of these grades must have the percentage of color shown in the table below.

For the solid red varieties the percentage stated refers to the area of the surface which must be covered with a good shade of solid red characteristic of the variety, except that an apple having color of a lighter shade of solid red or striped red than that considered as good shade of red characteristic of the variety may be admitted to a grade provided it has sufficient additional area covered so that the apple has as good an appearance as one with the minimum percentage of good red characteristic of the variety required for the grade.

For the striped red varieties the percentage stated refers to the area of the surface in which the stripes of good shade of red characteristic of the variety shall predominate over the stripes of lighter red, green or yellow. However, an apple having color of a lighter shade than that considered as good shade of red characteristic of the variety may be admitted to a grade provided it has sufficient additional area covered so that the apple has as good an appearance as one with the minimum percentage of stripes of good red characteristic of the variety required for the grade. Faded brown stripes shall not be considered as color except in the case of the Gray Baldwin variety.

Variety	U. S. Fancy Percent	U. S. No. 1 Percent
Solid Red:		
Aiken red	50	25
Arkansas Black	50	25
Black Ben	50	25
Detroit Red	50	25
Esopus Spitzenburg	50	25
Gano	50	25
King David	50	25
Lowry	50	25
Opalescent	50	25
Virginia Beauty	50	25
Winesap	50	25
Other similar varieties ..	50	25
Striped or Partially Red:		
Jonathan	50	25
Kinnard	50	25
McIntosh	50	25

Variety	U. S. Fancy Percent	U. S. No. 1 Percent
Missouri Pippin	50	25
Other similar varieties ..	50	25
Arkansas (Mammoth Black Twig)	33	15
Delicious	33	15
Baldwln	33	15
Gray Baldwin	33	15
Ben Davis	33	15
Bonum	33	15
Fameuse	33	15
Limbertwig	33	15
Nero	33	15
Northern Spy	33	15
Ontario	33	15
Paragon	33	15
Ralls (Geneton)	33	15
Rainer	33	15
Rome Beauty	33	15
Salome	33	15
Stayman Winesap	33	15
Sutton	33	15
Tompkins King	33	15
Wagener	33	15
Wealthy	33	15
Willowtwig	33	15
York Imperial	33	15
Other similar varieties ..	33	15
Stark	25	10

Striped or Partially Red:

Hubbardston	25	10
Other similar varieties ..	25	10
Red June	33	Tinge of color
Williams	33	" " "
Other similar varieties ..	33	" " "
Gravenstein	25	" " "
Jeffries	25	" " "
Oldenburg (Duchess of Old- enburg)	25	" " "
Red Astrachan	25	" " "
Shiawassee	25	" " "
Smokehouse	25	" " "
Summer Rambo	25	" " "
Twenty Qunce	25	" " "
Other similar varieties ..	25	" " "

Red Cheeked or Blushed:

Hyde King	(1)	None
Malden Blush	(1)	"

Variety	U. S. Fancy Percent	U. S. No. 1 Percent
Monmouth (Red Cheeked Pippin)	(1)	"
Winter Banana	(1)	"
Other red cheeked or blushed varieties	(1)	"
Yellow or green varieties ..	(2)	(2)

(1) Blushed cheek. (2) Characteristic color.

**Color Requirements for Some Varieties of Apples
Not Listed in U. S. Grades****Solid Red Variety**, U. S. Fancy 50 per cent, and
U. S. No. 1, 25 per cent: Black Oxford.**Striped or Partially Red Varieties:**

1. U. S. Fancy 50 per cent and U. S. No. 1, 25 per cent: Champion, Cortland, Crimson Beauty, Delaware Red (Lawver), Fancy, Gilliflower (Black), Gilliflower, Mother, Snow (Fameuse).

2. U. S. Fancy 33 per cent and U. S. No. 1, 15 per cent: Alexander, Apple of Commerce (Beach), Banks (Red Gravenstein) (Beach), Blue Pearmain, Buckingham, Canada Red, Chenango, Cooper Market, Doctor, Domine, Ingram, Jeffries, Kaignn, Spitzenburg, Lankford, Nickjack, Oliver, Seek-no-further, Sheriff, Smith Cider, Vandevere, Wolf River.

3. U. S. Fancy 33 per cent and U. S. No. 1, 10 per cent: Shackleford.

4. U. S. Fancy 33 per cent and U. S. No. 1, Tinge: Benoni, Early McIntosh, Early Strawberry, Sops of Wine.

5. U. S. Fancy 25 and U. S. No. 1, 10 per cent: Bismarek, Rambo.

6. U. S. Fancy 25 and U. S. No. 1, Tinge: Bentley, Bietigheimer, Blenheim, Boskoop, Fallawater (Tulpehocken), Hagloe, July, Liveland Raspberry, Lowland Raspberry, Milwaukee (Mass.), Minkler, Pewaukee.

Red Cheek or Blushed Varieties: U. S. Fancy, "Blushed Cheek" and U. S. No. 1, "none"; Batchelors Blush, Ewalt, Gideon, Lady.**Yellow or Green Varieties:** with both U. S. Fancy and U. S. No. 1 requiring "Characteristic Color": Belleflower (Yellow), Early Harvest, Early Ripe, Fall Pippin, Gloria Mundt, Golden Russet, Green Sweet, Grimes Golden, Huntsman, Mann, Northwestern Greening, Orange, Ortley, Primate, Rhode Island Greening, Roxbury, Russet, Starr, Swaar, Sweet Bough, Tolman Sweet Transparent (Yellow), White Pearmain.

Definitions of Terms

As used in these grades:

1. "Mature" means having reached the stage of maturity which will insure the proper completion of the ripening process.

Before a mature apple becomes overripe it will show varying degrees of firmness depending upon the stage of the ripening process. The following terms are used for describing these different stages of maturity of apples.

"Hard" means apples with tenacious flesh and starchy flavor. Apples at this stage are suitable for storage and long-distance shipment.

"Firm" means apples with tenacious flesh but becoming crisp with a slight starchy flavor except the Delicious variety. Apples at this stage are also suitable for storage and long-distance shipment.

"Firm ripe" means with crisp flesh except that in apples of the Gano, Ben Davis and Rome Beauty varieties, the flesh may be slightly mealy. Apples at this stage may be shipped long distances but should be moved into consumption within a short period of time.

"Ripe" means mealy and soon to become soft for the variety. Apples at this stage should be moved immediately into consumption.

2. "Overripe" means dead ripe, very mealy or soft, past commercial utility.

3. "Carefully handpicked" means that the apples do not show evidence of rough handling or of having been on the ground.

4. "Clean" means free from excessive dirt, dust, spray residue or other foreign material.

5. "Fairly well formed" means that the apples may be slightly abnormal in shape but not to an extent which detracts materially from the appearance of the fruit.

6. "Seriously deformed" means so badly misshapen that the appearance is severely affected.

7. "Damage" means any injury or defect which materially detracts from the appearance or keeping quality of the apples.

(a) Russetting which exceeds the following shall be considered as damage:

Russetting which is excessively rough on Roxbury Russet and other similar varieties.

Russetting on other varieties which covers a total area of more than 25 per cent of the surface in the aggregate except that—

(1) Smooth solid russetting which covers an area of more than 10 per cent of the surface in the aggregate shall be considered as damage unless the russetting is within or continuous with that in the stem basin or calyx cavity, in which case an additional 15 per cent shall be permitted provided that the total area covered shall not exceed 25 per cent in the aggregate.

(2) Slightly rough russetting which covers an area of more than 15 per cent of the surface if confined to the stem basin or calyx cavity or continuous therewith, or such russetting which covers an area of more than one-half inch in diameter if it is not continuous with the russetting in the stem basin or calyx cavity, shall be considered as damage.

(3) Rough russetting which is well within the stem basin and is not readily apparent shall be permitted but any other rough russetting which exceeds one-quarter inch in diameter shall be considered as "damage."

Any one of the following defects, or any combination thereof, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(b) Sunburn or sprayburn which has caused blistering or cracking of the skin or when the discolored area does not blend into the normal color of the fruit unless the injury can be classed as russetting (7a).

(c) Dark brown or black limbrubs which affect a total area of more than one-half inch in diameter or light brown limbrubs which affect a total area of more than one inch in diameter.

(d) Hail marks, drought spots or other similar depressions or scars which are not superficial or where the injury affects more than one-half inch of the surface in the aggregate.

(e) Disease. Scab spots which are not corked over or corked over scab spots which affect a total area of more than one-fourth inch in diameter.

Cedar-rust infection which exceeds in the aggregate an area of one-quarter inch in diameter.

Sooty blotch or fly speck which is thinly scattered over more than one-tenth of the surface, or dark, heavily concentrated spots which affect an area of more than one-half inch in diameter.

(f) Insects. More than two healed insect stings or any healed insect sting which is over one-eighth inch in diameter exclusive of any encircling discolored ring.

Worm holes.

8. "Serious damage" means any injury or defect which seriously detracts from the appearance or keeping quality of the apples.

(a) Russetting which exceeds the following shall be considered as serious damage:

Smooth solid russetting which affects more than one-half of the surface in the aggregate, including any russetting in the stem basin, or rough or bark-like russetting which detracts from the appearance of the fruit to a greater extent than the smooth solid russetting permitted provided that any amount of russetting shall be permitted on Roxbury Russet and similar varieties.

Any one of the following defects or any combination thereof, the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage.

(b) Sunburn or sprayburn which seriously detracts from the appearance of the fruit.

(c) Limbrubs which affect more than one-tenth of the surface in the aggregate:

(d) Hail marks, drought spots or scars if they materially deform or disfigure the fruit or if such defects affect more than one-tenth of the surface in the aggregate, provided that no hail marks which are unhealed shall be permitted and not more than an aggregate area of one-half inch shall be allowed for well healed hail marks where the skin has been broken.

(e) Visible watereore which affects an area of more than one-half inch in diameter.

(f) Disease. Scab spots which are not corked over or corked-over seab spots which affect a total area of more than three-fourths inch in diameter.

Cedar-rust infection which exceeds in the aggregate an area of three-fourths inch in diameter.

Sooty blotch or fly speck which affects more than one-third of the surface.

(g) Insects. More than five healed insect stings. Worm holes.

Tolerances for Preceding Grades

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent of the apples in any container may be below the requirements of the grade, provided that not more than 5 per cent shall be seriously damaged by insects and not more than one-fifth of this amount or 1 per cent shall be allowed for decay or internal breakdown.

When applying the foregoing tolerances to the combination grades no part of any tolerance shall be allowed to reduce, for the lot as a whole, the 50 per cent of apples of the higher grade required in the combination, but individual containers may not have less than 40 per cent of the higher grade.

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified.

For a tolerance of less than 10 per cent, individual packages in any lot may contain not more than double the tolerance specified, provided at least one specimen which does not meet the requirements shall be allowed in any one package.

Condition After Storage or Transit

Decay, scald or other deterioration which may have developed on apples after they have been in storage or transit shall be considered as affecting condition and not the grade.

Size Requirements

The numerical count, or the minimum size, of the apples packed in a closed container shall be indicated on the package.

When the numerical count is marked on the container the apples shall not vary more than one-fourth inch in their transverse diameter.

When the numerical count is not shown the minimum size shall be plainly stamped, stenciled or otherwise marked on the container in terms of whole inches, whole and half inches, whole and quarter inches, or whole and eighth inches, as $2\frac{1}{2}$ inches minimum, $2\frac{1}{4}$ inches minimum, or $2\frac{3}{4}$ inches minimum in accordance with the facts. It is suggested that both minimum and maximum sizes be marked on the container, as $2\frac{1}{4}$ to $2\frac{3}{4}$ inches or $2\frac{1}{2}$ to $2\frac{3}{4}$ inches, as such marking is especially desirable for apples marketed in the export trade.

"Size" means the transverse diameter of the apple taken at right angles to a line running from the stem to the blossom end.

In order to allow for variation incident to proper sizing, not more than 5 per cent of the apples in

any container may not meet the size requirements provided that when the maximum and minimum sizes are both stated an addition 10 per cent tolerance is provided for apples which are larger than the maximum size stated.

In measuring apples for minimum size marked on the package use the measurement of the greatest diameter at right angles to the line from stem to blossom end. In measuring for maximum size use the measurement of the shortest diameter at right angles to the line from stem to blossom end. An observation of machine sizing reveals that this is the manner in which machines work which size by diameter.

Packing Requirements

Each package shall be packed so that the apples in the shown face shall be reasonably representative in size, color and quality of the contents of the package.

Boxes—Apples packed in the Standard Northwestern apple boxes shall be arranged in the containers according to the approved and recognized methods with the stems pointing towards the ends of the boxes except when jumbled and all packages shall be well filled but the contents shall not show excessive or unnecessary bruising because of overfilled packages. Apples packed in the Standard Northwestern apple boxes shall show a total bulge (top and bottom) of not less than three-fourths inch. Each wrapped apple shall be completely enclosed by its individual wrapper.

Baskets—Apples packed in round stave bushel baskets or tubs shall be ring faced and tightly packed with sufficient bulge to prevent any appreciable movement of the apples within the containers when lidded.

Barrels—Apples in barrels shall be tightly packed.

In order to allow for variations incident to proper packing not more than 5 per cent of the containers in any lot may not meet these requirements.

Marking

In order to conserve space, abbreviation may be used for marking the United States grade names on containers. The following abbreviations are suggested where it is not desired to use the full grade name:

1. U. S. Fcy. for U. S. Fancy.
2. U. S. No. 1 for U. S. Number 1
3. U. S. Com. for U. S. Commercial.
4. U. S. Util. for U. S. Utility.
5. Combination grades may be designated by abbreviations of the grades preceded by the abbreviation "Comb." as "Comb. U. S. Fcy.—U. S. No. 1."

TABULATION OF DEFECTS PERMITTED IN U. S. GRADES FOR APPLES

Injury or Defect	U. S. Fancy, U. S. No. 1, U. S. Com.	U. S. Utility
Decay, Cork Spot, Int. Browning, Int. Breakdown, Scald, Freezing Inj., Worm Holes, Other Unhealed Insect Injury	None	None noticeable by casual examination
Dirt, Spray Residue	Practically None	½" diameter
Visible Watercore	None	None unhealed
Broken Skin	None unhealed	Incident to proper handling and packing
Bruises (such as caused in handling)	Incident to proper handling and packing	Must not seriously detract from appearance or seriously affect keeping quality
Stem and Calyx Cracks	1 crack, well healed, ¼" length	Well healed, ½" length

TABULATION OF DEFECTS PERMITTED IN U. S. GRADES FOR APPLES—Continued

Injury or Defect	U. S. Fancy, U. S. No. 1, U. S. Com.	U. S. Utility
Russetting Note: the russetting permitted is in addition to one of the other listed defects or any combination thereof the seriousness of which does not exceed the maximum allowed for any one defect.	Russetting as follows permitted: Any russetting which is not excessively rough on Roxbury Russet and similar varieties. Russetting on other varieties covering a total area of not more than 25% of surface in aggregate except that—(1) Not more than 10% in aggregate of smooth solid russetting permitted unless russetting within or continuous with stem basin or calyx cavity when an additional 15% is permitted provided total does not exceed 25% in aggregate. (2) Not more than 15% of slightly rough russetting permitted if confined to stem basin or calyx cavity or continuous with or not over $\frac{1}{2}$	Russetting as follows permitted: Any amount of russetting on Roxbury Russet and similar varieties. On other varieties any amount of smooth netlike russetting, or one-half of surface in aggregate of smooth solid russetting, or rough or bark-like russetting which detracts from appearance of fruit to the extent of smooth solid russetting permitted.

TABULATION OF DEFECTS PERMITTED IN U. S. GRADES FOR APPLES—Continued

Injury or Defect	U. S. Fancy, U. S. No. 1, U. S. Com.	U. S. Utility
Sprayburn, Sunburn	Inch area if not continuous with russetting in stem basin or calyx cavity. (3) Not more than $\frac{1}{4}$ inch area of rough russetting outside of russetting well within stem basin which is not readily apparent.	Must not seriously detract from appearance or seriously affect keeping quality
Red Skin Spot	1/10 surface if heavy, 1/5 if scattered.	Any amount
Bitter Pit, Jonathan Spot	3 indistinct spots	Spotting 1/10 surface if not materially deforming or disfiguring the fruit

TABULATION OF DEFECTS PERMITTED IN U. S. GRADES FOR APPLES—Continued

Injury or Defect	U. S. Fancy, U. S. No. 1, U. S. Com.	U. S. Utility
Fruit, York, King David, Drought Spots, Hard Dry Bruises	$\frac{1}{2}$ " diameter aggregate if superficial	Affecting 1/10 surface if not materially deforming or disfiguring the fruit
Limbrubs, Light Brown	1" diameter aggregate	1/10 surface aggregate
Limbrubs, Dark or Black, Scars	$\frac{1}{2}$ " diameter aggregate	1/10 surface aggregate if not materially deforming or disfiguring the fruit; or $\frac{1}{2}$ " diameter aggregate and well healed if skin broken
Hall Marks	$\frac{1}{2}$ " diameter aggregate if superficial and skin not broken	
Apple Scab, Apple Blotch, Cedar Rust	$\frac{1}{4}$ " diameter aggregate (Scab spots corked over)	$\frac{3}{4}$ " diameter aggregate (Scab spots corked over)
Sooty Blotch, Fly Speck	Thinly scattered over 1/10 surface, or $\frac{1}{2}$ " heavily concentrated	Scattered over 1/3 of surface

TABULATION OF DEFECTS PERMITTED IN U. S. GRADES FOR APPLES—Concluded

Injury or Defect	U. S. Fancy, U. S. No. 1, U. S. Com.	U. S. Utility
Healed Stings	2 to apple, dry and corky, not over $\frac{1}{8}$ " diameter, exclusive of any discolored ring.	5 to apple, dry and corky.
San Jose Scale	3 heavy marks on green surface, 5 to 10 on red surface, depending on prominence. Marks in calyx of well colored apples not objectionable; a few scale permitted in calyx.	Marks confined to 1/10 surface, if thick or grouped, 1/3 if thinly scattered. A few scale permitted.
SHAPE	Fairly well formed.	Not seriously misshappen or deformed.

STANDARD GRADES FOR CANNERY APPLES
(Revised July 23, 1930)

U. S. No. 1 shall consist of apples of one variety which are not overripe; which are free from decay, worm holes, freezing injury, internal breakdown, and from any defect which cannot be removed during the usual commercial preparation for use without causing a loss of over 5%, by weight, of the apple in excess of that which would occur if the apple were perfect. (See minimum size.)

U. S. No. 2 shall consist of apples of one variety which are not overripe; which are free from freezing injury, internal breakdown, and from any defect which cannot be removed during the usual commercial preparation for use without causing a loss of over 25%, by weight, of the apple in excess of that which would occur if the apple were perfect. (See minimum size.)

Ciders shall consist of apples which do not meet the requirements of either of the foregoing grades.

Minimum Size

The minimum size may be fixed by agreement between buyer and seller. Apples below this specified minimum size shall be classed as **ciders**.

STANDARDS FOR ASPARAGUS (FRESH)

(Revised February 15, 1941)

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent., or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified.

Grades

U. S. No. 1 shall consist of stalks of asparagus which are fresh, well trimmed, and fairly straight; which are free from decay and from damage caused by spreading or broken tips, dirt, disease, insects or mechanical or other means.

Unless otherwise specified each stalk shall have a diameter of not less than one-half inch, and not less

than two-thirds of the stalk length shall be of a green color. Any lot may be otherwise classified as to diameter and amount of green color. (See Diameter Classification, Amount of Green Color and Stalk Length.)

Tolerance for Defects. In order to allow for variations, other than diameter, length, and trimming, incident to proper grading and handling, not more than 10 per cent., by count, of the stalks in any container may be below the requirements of the grade, but not more than one-half of this tolerance, or 5 per cent., shall be allowed for defects causing serious damage, and not more than one-fifth of this amount, or 1 per cent., shall be allowed for decay. In addition, not more than 10 per cent., by count, of the stalks in any container may be not well trimmed.

Tolerance for Diameter and Length. In order to allow for variations in diameter and length incident to proper sizing, not more than a total of 10 per cent., by count, of the stalks in any container may be below the prescribed minimum diameter for the grade or any other specified minimum diameter or any specified minimum length.

U. S. No. 2 shall consist of stalks of asparagus which are fresh, fairly well trimmed, and not badly misshapen; which are free from decay and from serious damage caused by spreading or broken tips, dirt, disease, insects, or mechanical or other means.

Unless otherwise specified each stalk shall have a diameter of not less than five-sixteenths inch, and not less than one-half of the stalk length shall be of a green color. Any lot may be otherwise classified as to diameter and amount of green color. (See Diameter Classification, Amount of Green Color and Stalk Length.)

Tolerance for Defects. In order to allow for variations, other than diameter, length, and trimming, incident to proper grading and handling, not more than 10 per cent., by count, of the stalks in any container may be below the requirements of the grade, but not more than one-tenth of this tolerance, or 1 per cent., shall be allowed for decay. In addition, not more than 10 per cent. by count, of the stalks in any container may be not fairly well trimmed.

Tolerance for Diameter and Length. In order to allow for variations in diameter and length incident to proper sizing, not more than a total of 10 per cent., by count, of the stalks in any container may be below

the prescribed minimum diameter for the grade or any other specified minimum diameter or any specified minimum length.

Unclassified shall consist of stalks of asparagus which have not been classified in accordance with any of the foregoing grades. The term "Unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Diameter Classification

The following terms are provided for describing the diameters of any lot:

Very Small	Less than 5/16-inch
Small	5/16-inch to less than 8/16-inch
Medium	8/16-inch to less than 11/16-inch
Large	11/16-inch to less than 14/16-inch
Very Large	14/16-inch and up

Amount of Green Color

When the asparagus has less or more green color than is specified in the grade it may be described as $\frac{1}{4}$ green, $\frac{3}{4}$ green, etc., in accordance with the facts.

Stalk Length

There is no minimum stalk length specified in the grades but the minimum stalk length should be stated in terms of whole or whole and half inches in connection with the grade designation as U. S. No. 1— $8\frac{1}{2}$ -inch minimum, U. S. No. 1 Large—7-inch minimum, U. S. No. 1 Large— $10\frac{1}{2}$ -inch minimum, etc., in accordance with the facts.

The reason no definite minimum length is specified is due to the wide variation in minimum stalk length as packed in the various producing districts. This variation in stalk length ranges from 5 to 7 in some districts to $8\frac{1}{2}$ to $10\frac{1}{2}$ inches in others.

Definitions of Terms

As used in these standards:

1. "Fresh" means that the stalk is not limp or flabby.
2. "Well trimmed" means that at least two-thirds of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not stringy or frayed.
3. "Damage" means any injury or defect which materially affects the appearance, edible or shipping quality.

4. "Diameter" means the greatest thickness of the stalk measured at a point approximately 1 inch from the butt.

5. "Fairly well trimmed" means that at least one-third of the butt of the stalk is smoothly trimmed in a plane approximately parallel to the bottom of the container and that the butt is not badly stringy or frayed.

6. "Badly misshapen" means that the stalk is so badly flattened, crooked, or otherwise so badly deformed that its appearance is seriously affected.

7. "Serious damage" means any injury or defect which seriously affects the appearance, edible or shipping quality.

STANDARD GRADES FOR SNAP BEANS FOR CANNING OR FREEZING

(Revised March 1, 1940)

U. S. No. 1 shall consist of snap beans of similar varietal characteristics (1) which are fresh (2), firm (3), tender (4), fairly well formed (5), free from foreign material, vines (6), decay, anthracnose, and from injury (7), caused by rust, scars, insects, disease, mechanical or other means.

For ROUND VARIETIES, unless otherwise specified, the maximum diameter (8) of beans allowed in this grade shall be not greater than 24/64 of an inch (commonly known as 4-sieve size and smaller). Beans 24/64 of an inch in diameter (8) and smaller shall in all cases be classed as U. S. No. 1 provided they meet the other requirements for this grade. (See "Size Classification.")

For FLAT or SEMI-ROUND VARIETIES the maximum diameter (8) of beans allowed in this grade may be fixed by agreement between buyer and seller. (See "Size Classification.")

U. S. No. 2 shall consist of snap beans of similar color, which are not extremely different in shape of cross section (9) and which are fairly fresh (10), firm (3), not tough or overmature (11), not seriously misshapen (12), free from vines (6), foreign material, decay, anthracnose, and from damage (13), caused by rust, scars, insects, disease, mechanical or other means.

There shall be no size requirement of U. S. No. 2 grade.

Culls and Cull Material shall consist of beans which do not meet the requirements of either of the foregoing grades, and shall include foreign material and vines (6).

Definition of Terms

As used in these standards:

1. "Similar varietal characteristics" means that the beans are of the same general type and color.
2. "Fresh" means that the pod is not materially wilted.
3. "Firm" means that the walls of the bean are reasonably solid, not puffy or spongy.
4. "Tender" means that the pod is succulent and practically free from fibre or strings.
5. "Fairly well formed" means that the bean is not more than moderately curved, crooked, twisted or tapered.
6. "Vines" means any part of the bean plant excepting pods and the short stems or petioles on which the pods are borne. In making grade determinations, all vines attached to the beans shall be removed and placed with the culls.
7. "Injury" means any defect which affects the canning or freezing quality.
8. "Diameter" means thickness as determined by the width of the smallest slot through which the bean may be passed, without forcing, in any one or combination of positions.
9. "Extremely different in shape of cross section" means that distinctly round type and distinctly flat type beans are mixed in the same container. Beans which are a mixture of round and semi-round types or are a mixture of flat and semi-round types are not considered extremely different and shall be allowed in U. S. No. 2 grade.
10. "Fairly fresh" means that the pod is not materially wrinkled.
11. "Tough or overmature" means that the pod is tough, leathery or fibrous from any cause.
12. "Serious misshapen" means that the bean is badly curved, crooked, twisted or tapered.
13. "Damage" means any defect which materially affects the canning or freezing quality.

Size Classifications

Subject to agreement between buyer and seller, other size specifications may be used in connection with U. S. No. 1 grade in order to permit larger size beans in this grade and/or to allow for sub-division of the grade on the basis of size; provided, however, that round beans which are 24/64 inch in diameter (8) and smaller shall in no case be excluded from U. S. No. 1 grade on account of size.

When special size specifications are used, it is recommended that they be based upon one or more of the following generally recognized size classifications:

No. 1 sieve size beans	14.5	of an inch
	64	smaller
No. 2 " " "	Over 14.5	to 18.5 of an inch
	64	64 inclusive
No. 3 " " "	Over 18.5	to 21 of an inch
	64	64 inclusive
No. 4 " " "	Over 21	to 24 of an inch
	64	64 inclusive
No. 5 " " "	Over 24	to 27 of an inch
	64	64 inclusive
No. 6 " " "	Over 27	of an inch
	64	

STANDARD GRADES FOR TOPPED BEETS

(Effective May 1, 1934)

The tolerance for the standards are placed on a container basis. However, for a tolerance of 10 per cent., individual packages in any lot may contain not more than one and one-half times the tolerance specified, and for one of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified, provided that at least one specimen which does not meet the requirements shall be allowed in any one package and that the average for the entire lot, based on sample inspection shall average within the tolerances specified.

Grades

U. S. No. 1 shall consist of beets of similar varietal characteristics which are firm, fairly smooth, fairly well shaped, well trimmed and free from soft rot and from damage caused by freezing, growth cracks, cuts, dirt, disease, insects, rodents or mechanical or other means. Unless otherwise specified, the minimum diameter of the beets shall be not less than 2 inches. (See Size.)

In order to allow for variations other than size incident to proper grading and handling, not more than 10

per cent., by weight, of the beets in any container may be below the requirements of this grade, but not more than one-tenth of this amount, or 1 per cent., shall be allowed for soft rot.

Unclassified shall consist of beets which are not graded in conformity with the foregoing grade.

Size

The following terms are provided for describing the size of the beets in any lot: Small means less than 2 inches in diameter; medium means 2 to 3½ inches, inclusive; large means over 3½ inches.

In order to allow for variations incident to proper sizing not more than 5 per cent., by weight, of the beets in any container may be below any specified minimum size and in addition not more than 10 per cent. may be above any specified maximum size.

Definitions of Terms

As used in these grades:

1. "Firm" means that the beet is not soft, flabby, or shriveled.
2. "Fairly smooth" means that the appearance of the beet is not materially injured by roughness such as is caused by abnormal growing conditions or roughness of the crowns caused by the shedding of a considerable number of dead leaves. Slight roughness over the crown or slight pitting caused by the shedding of dead leaves shall not be considered as injury to the appearance.
3. "Fairly well shaped" means that the beet is not misshapen to such an extent as to materially injure its appearance.
4. "Well trimmed" means that the tops are trimmed to not more than one-half inch in length and that unattractive secondary rootlets have been removed.
5. "Soft rot" means any soft, mushy or leaky condition of the tissue.
6. "Damage" means any injury or defects which materially injures the appearance of the individual beet or the general appearance of the beets in the container, or which cannot be removed without a loss of more than 5 per cent. of the total weight of the beet.
7. "Diameter" means the greatest dimension of the beet taken at right angles to the longitudinal axis.

STANDARD GRADES FOR CABBAGE

(Revised December 20, 1939)

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerances specified, provided at least one specimen which does not meet the requirements shall be allowed in any one package.

Grades

U. S. No. 1 shall consist of heads of cabbage which are of one type, and of reasonable solidity; which are not withered, puffy or burst and which are free from soft rot, seed stems and from damage caused by discoloration, freezing, disease, insects, or mechanical or other means.

Unless otherwise specified, each head shall be well trimmed. However, cabbage may be specified as "U. S. No. 1 Green" when the cabbage in each container generally has fairly good green color. When specified as "U. S. No. 1 Green", each head may have not more than 7 leaves which do not enfold the head fairly tightly more than two-thirds the distance from the base to the top.

In order to allow for variations, other than excess number of outer leaves on "U. S. No. 1 Green" cabbage, incident to proper grading and handling, not more than a total of 10 per cent., by weight, of the heads in any container may not meet the requirements of this grade, but not more than one-fifth of this amount, or 2 per cent., may be allowed for soft decay. In addition, when a lot of cabbage is specified as "U. S. No. 1 Green", not more than 10 per cent. may not meet the requirements as to number of outer leaves.

U. S. Commercial shall consist of heads of cabbage which meet the requirements of U. S. No. 1 grade except for the increased tolerance for defects specified below.

Unless otherwise specified, each head shall be well trimmed. However, cabbage may be specified as "U. S. Commercial Green" when the cabbage in each container generally has fairly good green color. When specified as "U. S. Commercial Green", each head may have not more than 7 leaves which do not enfold the head fairly tightly more than two-thirds the distance from the base to the top.

In order to allow for variations, other than excess number of outer leaves on "U. S. Commercial Green" cabbage, incident to proper grading and handling, not more than a total of 25 per cent., by weight, of the heads in any container may not meet the requirements of this grade, but not more than two-fifths of this amount or a total of 10 per cent., shall be allowed for defects causing serious damage, but not more than 2 per cent. may be allowed for soft decay. In addition when a lot of cabbage is specified as "U. S. Commercial Green" not more than 15 per cent. may not meet the requirements as to number of outer leaves.

Unclassified shall consist of cabbage which has not been classified in accordance with the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Size

The minimum size or minimum and maximum sizes may be specified in connection with the grades as "U. S. No. 1, 1 pound min.", or "U. S. No. 1, 2 to 4 pounds", or any lot may be classified as Small, Medium, Large, Small to Medium, or Medium to Large, in accordance with the facts.

	SMALL	MEDIUM	LARGE
Pointed under	1 1/2 lbs.	1 1/2 to 3 lbs.	Over 3 lbs.
Domestic under	2 lbs.	2 to 5 lbs.	Over 5 lbs.
Danish under	3 lbs.	3 to 6 lbs.	Over 6 lbs.

In order to allow for variations incident to proper sizing not more than a total of 15 per cent., by weight, of the heads in any container may vary from the size specifications but not more than 10 per cent. may be either above or below the size specified. This tolerance is in addition to the tolerance for grade defects.

Definition of Terms

As used in these Standards:

- I. "One type" means that all the lot is Pointed, Danish, Domestic, Savoy, or Red as the case may be.

Pointed type includes such varieties as Early Jersey Wakefield, Charleston Wakefield, Early York, Winingstadt, and others which normally develop oblong, conical or pointed shaped heads. Danish type includes such late maturing varieties as Danish Ballhead or Hollander, Danish Roundhead, etc., and such early maturing varieties as Cannonball, Danish Summer Ballhead, etc., which normally develop hard, tightleaved, compactly formed heads. A head of any such variety even after trimming will appear tight and smooth leaved around the basal portion and when viewed from the stem end, circular and regular in outline. Domestic type includes such varieties as Succession, All Head Early, Flat Dutch, and others that are commonly termed Domestic and which normally develop heads flat in shape and less compactly formed than those of the Danish type. The term also includes such varieties as Copenhagen, Glory of Enhuizen and others that develop heads roundish in shape but which in solidity of head and storage qualities are similar to the Flat Domestic type.

2. "Reasonable solidity" means fairly firm for pointed type cabbage and Southern Domestic type cabbage. Northern Domestic type cabbage shall be firm and Danish or Hollander type fairly hard. "Reasonable solidity" as applied to Savoy cabbage means not soft or puffy; Savoy type cabbage is characteristically loosely formed and rather light in weight.

3. "Puffy" means that the heads are very light in weight in comparison to size and have air spaces in the central portion. They normally feel firm at time of harvesting but soften quickly. They are known as "Balloon Heads" in certain sections.

4. "Seed Stems" means those heads which have seed stalks showing or in which the formation of seed stalks has plainly begun.

5. "Damage" means any defect or injury which materially affects the appearance, or the edible or shipping quality. Worm injury on the outer head leaves or wrapper leaves which materially affects the appearance of the head, or worm holes which extend deeply into the compact portion of the head shall be considered as damage.

6. "Serious damage" means any defect or injury which seriously affects the appearance, or the edible or shipping quality. Cabbage which is affected by soft rot or which is seriously puffy, badly burst, or seriously injured by seed stems, discoloration, freezing, disease, insects, mechanical or other means shall be consid-

ered as seriously damaged. Worm injury on the outer head leaves or wrapper leaves which seriously affect the appearance of the heads, or worm holes which seriously affect the compact portion of the head shall be regarded as serious damage.

7. "Well trimmed" means that the heads shall have not more than four leaves which do not enfold the head fairly tightly more than two-thirds the distance from the base to the top, and that the stems do not extend more than one-half inch beyond the point of attachment of the outermost leaves.

STANDARDS FOR CARROTS FOR PROCESSING (Revised December 24, 1943)

Grades

U. S. No. 1 shall consist of carrots of similar varietal characteristics (1) which are firm (2), fairly well colored (3), fairly well formed (4), fairly smooth (5), and not woody (6); free from soft rot, cull material (7), and free from damage (8), caused by growth cracks, sunburn, green cores, pithy cores, watercore, internal discoloration, oil spray, freezing, dry rot, other diseases, insects, mechanical or other means. (See Topping Requirements and Size.)

U. S. No. 2 shall consist of carrots of similar varietal characteristics (1) which are firm (2), fairly well colored (3), not badly misshapen (9), excessively rough (10), or woody (6), free from soft rot, cull material (7), and free from serious damage (11), by any cause. (See Topping Requirements and Size.)

Culls shall consist of carrots which fail to meet the requirements of either of the foregoing grades and size specifications.

Cull material. (See definition No. 7.)

Topping Requirements

Unless otherwise specified, tops or sprouts shall be cut, snapped, or twisted off to within three-fourths inch of the crown of the root. In making grade determinations, all portions of leafstems or sprouts over three-fourths inch long, or any other specified length, shall be removed from the roots and scored as cull material.

Size

Unless otherwise specified, the minimum length shall be not less than 3 inches.

The minimum and maximum diameters for U. S. No. 1 and U. S. No. 2 grades may be fixed by agree-

ment between the buyer and the seller. "Diameter" means the greatest dimension of the root taken at right angles to the longitudinal axis. Roots which fail to meet the size specifications shall be considered as "Culls".

Tolerances

In the application of these standards, it is assumed that in most instances sellers will not sort their carrots into separate lots of U. S. No. 1 and U. S. No. 2 grades before delivery to the buyer. In such cases, there is no need for tolerances. If the contract between the buyer and the seller calls for the delivery of lots containing only one grade, such as U. S. No. 1 or U. S. No. 2, then unless otherwise specified, a tolerance of 10 per cent. shall be allowed for carrots which fail to meet the requirements of the grade, other than for size and cull material, but not more than three-tenths of this amount, or 3 per cent., shall be allowed for carrots affected by soft rot, but not more than one-third of this amount, or 1 per cent., shall be allowed for carrots which are seriously damaged by soft rot. In addition, not more than 2 per cent., by weight, shall be allowed for cull material. An additional tolerance of 10 per cent. shall be allowed for carrots which fail to meet the specified size requirements, but not more than one-half of this amount, or 5 per cent., shall be allowed for carrots which are below the specified minimum diameter or length.

Definitions of Terms

As used in these standards:

1. "Similar varietal characteristics" means that the carrots are of the same general type.
2. "Firm" means that the carrot is not soft, flabby or shriveled.

3. "Fairly well colored" means that the outside and inside color of the carrot is orange, orange red, or orange scarlet, but not a pale orange or distinct yellow color.

4. "Fairly well formed" means that the carrot is not forked, or materially crooked, or otherwise misshapen, to the extent that, in the ordinary process of trimming, a loss of over 5 per cent., by weight, of the root is incurred in excess of that which would occur if the root were perfect.

5. "Fairly smooth" means that the carrot is not rough, ridged, or covered with secondary rootlets, to the extent that, in the ordinary process of trimming,

a loss of over 5 per cent., by weight, of the root is incurred in excess of that which would occur if the root were perfect.

6. "Woody" means that the flesh of the carrot is tough and fibrous.

7. "Cull material" means pieces of carrots, loose tops and portions of attached tops and sprouts in excess of the specified length, loose dirt, adhering caked dirt, weeds or other foreign matter. Carrots with adhering caked dirt, and tops or sprouts which are longer than the specified length, shall not be scored against U. S. No. 1 or U. S. No. 2 grades, but such dirt, and such portions of tops and sprouts which are longer than the specified length, shall be removed from the roots and scored as cull material.

8. "Damage" means any injury or defect which materially affects the processing quality; or which cannot be removed in the ordinary process of trimming without a waste of more than 5 per cent., by weight, in excess of that which would occur if the root were perfect.

9. "Badly misshapen" means that the carrot is forked or misshapen to the extent that, in the ordinary process of trimming, a loss of over 25 per cent., by weight, of the root is incurred in excess of that which would occur if the root were perfect.

10. "Excessively rough" means that the carrot is so rough or ridged that, in the ordinary process of trimming, a loss of over 25 per cent., by weight, of the root is incurred in excess of that which would occur if the root were perfect.

11. "Serious damage" means any injury or defect which seriously affects the processing quality; or which cannot be removed in the ordinary process of trimming, without a loss of more than 25 per cent., by weight, in excess of that which would occur if the root were perfect.

STANDARD GRADES FOR TOPPED CARROTS (Effective October 24, 1928)

Grades

U. S. No. 1 shall consist of carrots of similar varietal characteristics which are well trimmed, firm, fairly smooth, not badly misshapen; free from freezing injury, decay, and from damage caused by dirt, sprouts, second growth, growth cracks, cuts, disease, insects, mechanical or other means.

Unless otherwise specified, the diameter of each carrot, shall be not less than $1\frac{1}{2}$ inches nor more than 3 inches, and the length shall be not less than 3 inches.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by weight, of any lot may be larger than the specified maximum diameter and not more than a total of 5 per cent., by weight, may be smaller than the specified minimum diameter and minimum length. In addition, not more than a total of 10 per cent., by weight, may be below the remaining requirements of this grade but not to exceed 5 per cent. shall be allowed for defects causing serious damage and not more than 3 per cent. shall be for carrots affected by soft rot not more than $\frac{1}{3}$ of this amount or 1 per cent. shall be allowed for carrots which are seriously affected by soft rot.

Unclassified shall consist of carrots which are not graded in conformity with the foregoing grade.

Definitions of Terms

As used in these grades:

1. "Well trimmed" means that the tops shall be cut back to not more than one-half inch in length.

2. "Firm" means that the carrots are not soft, flabby or shriveled.

3. "Badly misshapen" means that the carrots are so forked or so misshapen as to cause an appreciable waste in the ordinary preparation for use.

4. "Damage" means any injury which materially affects the appearance of the lot or causes appreciable waste in the ordinary preparation for use. Unhealed growth cracks are considered as damage but healed over growth cracks which are smooth and shallow shall not be considered as damage. The superficial green color frequently noticed encircling the stem end of the carrots shall not be considered as damage. Carrots caked with excessive dirt are damaged.

5. "Serious damage" means any damage from the causes mentioned which seriously affects the appearance or which cannot be removed in the ordinary process of preparation for use without a waste of 20 per cent. or more of the total weight.

6. "Diameter" means the greatest dimension of the root taken at right angles to the longitudinal axis.

STANDARD GRADES FOR ROUGH CELERY
(Revised January 10, 1938)

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified, provided at least one specimen which does not meet the requirements shall be allowed in any one package.

Numbers and letters in parentheses following grade terms indicate where such terms are defined under Definitions of Terms.

Grades

U. S. Fancy shall consist of stalks (1) of celery of similar varietal characteristics (2) which are fairly well developed (3) and have fairly good heart formation (4), which are clean (5), well balanced (6), well trimmed (7), not badly spread, and are free from black-heart, brown stem, decay, doubles and from damage (8) caused by wilting (8), cut worms (8a), freezing (8), growth cracks (8b), hollow crown (8), pithy branches (8c), seed-stems (8d), disease (8), insects or mechanical or other means (8).

The average midrib length (9) of the outer whorl of branches on stalks in this grade shall be not less than 6 inches. The stalk length may be stated in terms of the nearest even inch as 20 inches, 22 inches, 24 inches, etc., in accordance with the facts but when tops have not been generally clipped back the length of stalks (10) shall be not less than 18 inches.

When the tops have been generally clipped back, this fact and the resulting stalk length shall be stated following the grade designation as, for example, "U. S. Fancy—clipped to 16 inches."

In order to allow for variations, other than lengths, incident to proper grading and handling, not more than 10 per cent., by count, of the stalks in any container may be below the requirements of this grade, but not more than one-fifth of this amount, or 2 per cent., shall be allowed for decay. In addition, not

more than 5 per cent., by count, of the stalks in any container may not meet the requirements relating to stalk length, and not more than 5 per cent. shall be allowed for stalks having an average midrib length shorter than that specified.

U. S. No. 1 shall consist of stalks (1) of celery of similar varietal characteristics (2) which are fairly well developed (3) and have fairly good heart formation (4); which are well trimmed (7), which are not badly spread and are free from blackheart, decay, and from damage (8) caused by brown stem (8), wilting (8), cut worms (8a), freezing (8), growth cracks (8b), hollow crown (8), pithy branches (8c), seed-stems (8d), dirt (8e), doubles (8f), disease (8), insects or mechanical or other means (8). Unless otherwise specified, stalks shall be fairly well blanched (11). However, any lot of celery which meets all the requirements of this grade except as to blanching may be designated as "U. S. No. 1 Mixed Blanch", provided that any lot of celery which has a dark green appearance shall be designated as "U. S. No. 1 Green".

Unless otherwise specified, the average midrib length (9) of the outer whorl of branches on stalks in this grade shall not be less than 5 inches.

Stalk length may be stated in terms of the nearest even inch as 20 inches, 22 inches, 24 inches, etc., in accordance with the facts, but unless otherwise specified when tops have not been generally clipped back the length of stalks (10) shall be not less than 18 inches.

When the tops have been generally clipped back, this fact and the resulting stalk length, shall be stated following the grade designation as, for example, "U. S. No. 1—clipped to 16 inches."

In order to allow for variations, other than lengths, incident to proper grading and handling, not more than a total of 15 per cent. by count, of the stalks in any container may be below the requirements of this grade, provided that not more than two-thirds of this amount, or 10 per cent., shall be allowed for defects other than pith, but not more than 2 per cent. shall be allowed for decay. In addition, not more than 5 per cent., by count, of the stalks in any container may not meet the requirements relating to stalk length, and not more than 5 per cent., shall be allowed for stalks having an average midrib length shorter than that specified.

U. S. Combination Grade. Any lot of celery may be designated "U. S. Combination" when not less than

60 per cent., by count, of the stalks in each container meet the requirements of U. S. No. 1 grade and the remainder U. S. No. 2 grade.

In order to allow for variations other than lengths incident to proper grading and handling, not more than 5 per cent., by count, of the stalks in any container may be below the requirements of U. S. No. 2 grade, but not more than two-fifths of this amount, or 2 per cent., shall be allowed for decay. In addition, not more than 5 per cent., by count, of the stalks in any container may not meet the requirements relating to stalk length and not more than 5 per cent. shall be allowed for stalks having an average midrib length shorter than that specified. No part of any tolerance shall be allowed to reduce, for the lot as a whole, the percentage of U. S. No. 1 required in the combination, but individual containers may have not more than 10 per cent. less than the percentage of U. S. No. 1 stalks required.

U. S. No. 2 grade shall consist of stalks (1) of celery of similar varietal characteristics (2) which are fairly well developed (3), have fairly good heart formation (4), which are well trimmed (7) and free from blackheart, decay, and from serious damage (12) caused by brown stem (12), wilting (12), cut worms (12a), freezing (12), growth cracks (12b), hollow crown (12), pithy branches (12c), seed-stems (12d), dirt (12e), doubles (12f), disease, insects or mechanical or other means (12). Unless otherwise specified stalks shall be fairly well blanched. However, any lot of celery which meets all the requirements of this grade except as to blanching may be designated as "U. S. No. 2 Mixed Blanch", provided that any lot of celery which has a dark green appearance shall be designated as "U. S. No. 2 Green."

Unless otherwise specified, the average midrib length (9) of the outer whorl of branches on stalks in this grade shall be not less than 4 inches.

Stalk length may be stated in terms of the nearest even inch as 20 inches, 22 inches, 24 inches, etc., in accordance with the facts, but unless otherwise specified when tops have not been generally clipped back the length of stalks shall be not less than 18 inches.

When the tops have been generally clipped back, this fact and the resulting stalk length, shall be stated following the grade designation as, for example, "U. S. No. 2—clipped to 16 inches."

In order to allow for variations other than lengths incident to proper grading and handling, not more

than 10 per cent., by count, of the stalks in any container may be below the requirements of this grade, but not more than one-fifth of this amount, or 2 per cent., shall be allowed for decay. In addition, not more than 5 per cent., by count, of the stalks in any container may not meet the requirements relating to stalk length and not more than 5 per cent. shall be allowed for stalks having an average midrib length shorter than that specified.

Unclassified shall consist of stalks of celery which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

Requirements as to Count

The number of stalks in the container shall be specified by numerical count or in terms of dozens or half dozens. Variations from the number specified shall be allowed as follows:

Less than 50 stalks—3 stalk variation.

50 to 70 stalks, incl.—4 stalk variation.

More than 70 stalks—5 stalk variation.

Definitions of Terms

As used in these standards:

1. "Stalk" means an individual plant.

2. "Similar varietal characteristics" means that the stalks in any container have the same color and character of growth. For example, celery of Giant Pascal and Golden Self Blanching types must not be mixed.

3. "Fairly well developed" means that the outer branches are not spindly or abnormally short and thin.

4. "Fairly good heart formation" means that the inner heart branches are of reasonable number, length and stockiness.

5. "Clean" means that the stalk is practically free from dirt or other foreign materials. All celery which is washed may not be sufficiently free from dirt or other foreign materials to be considered clean, while other lots which have not been washed may meet this requirement.

6. "Well blanched" means that the midrib portions of the branches on the stalks are generally of a creamy white color.

7. "Well trimmed" means that the outside coarse and damaged branches have been removed and the root or roots have been so trimmed that the remaining portion of the root or roots do not extend a distance of more than 3 inches below the point of attachment of the outer branches. The actual length of the root or roots shall not be measured, but the distance through which they extend below the base of the branches shall be measured when the stalk is resting in an upright position on a solid surface.

8. "Damage" means any injury or defect which materially affects the appearance, or the edible or shipping quality. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Cut worms—when the worms are present, or when worm injury occurs on the heart branches, or when occurring on the midrib portion of more than two branches, or when aggregating more than two-thirds of a square inch on the midrib portion of the branch or branches.

(b) Growth cracks, when the stalk has more than two branches affected by growth cracks, each of which is more than $\frac{1}{2}$ inch long. Growth cracks of any length affecting not more than two branches shall be permitted.

(c) Pithy branches, when the stalk has more than two branches which are pithy. Pithy branches means those which have a distinctly open texture with air spaces in the central portion. When judging stalks for damage by pithiness the branches should be examined at about the center of the midrib length.

(d) Seed-stems, when the stalk has a seed-stem the length of which is more than one and one-half times the greatest diameter of the stalk. The greatest diameter of the stalk shall be measured at a point 2 inches above the point of attachment of the outer branches to the root. The length of the seed-stem shall be measured from the point of attachment of the outer branches at the base of the seed-stem to the top of the actual seed-stem exclusive of any leaves or leaf-stems attached to the top of the seed-stem.

(e) Dirt, when the stalk is caked with dirt.

(f) Doubles when not separated and the appearance is seriously affected, or if separated and either of the stalks is badly curved, or when the heart branches are not fairly well protected.

9. "Midrib length" of a branch means the distance between the point of attachment to the root and the first node.

10. "Length of stalk" means the distance from where the main root is cut off to a point which represents the average length of the longest branches and leaves.

11. "Fairly well blanched" means that the midrib portion of the branches on the stalks are generally of a light greenish to creamy white color.

12. "Serious damage" means any injury or defect which severely affects the appearance, or the edible or shipping quality. Any one of the following defects, or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Cut worms—when the worms are present or when worm injury occurs on the heart branches, or when occurring on the midrib portion of more than three branches, or when aggregating more than one square inch on the midrib portion of the branch or branches.

(b) Growth cracks, when the stalk has more than four branches affected by growth cracks each of which is more than $\frac{1}{2}$ inch long.

(c) Pithy branches, when the stalk has more than four branches which are pithy, or when more than one-half of the outer branches (other than heart branches) are pithy. Pithy branches means those which have a distinctly open texture with air spaces in the central portion. When judging stalks for serious damage by pithiness the branches should be examined at about the center of the midrib length.

(d) Seed-stems, when the stalk has a seed-stem the length of which is more than twice the greatest diameter of the stalk. The greatest diameter of the stalk shall be measured at a point 2 inches above the point of attachment of the outer branches to the root. The length of the seed-stems shall be measured from the point of attachment of the outer branches at the base of the seed-stem to the top of the actual seed-stem exclusive of any leaves or leaf-stems attached to the top of the seed-stem.

(e) Dirt, when the stalk is badly caked with dirt.

(f) Doubles, when the heart branches are not fairly well protected.

STANDARD GRADES FOR SWEET CHERRIES
(Effective June 2, 1927)

Grades

U. S. No. 1 shall consist of fresh cherries of one variety which are well formed, mature, but not soft, overripe, or shriveled, and which are free from decay and from damage caused by dirt or other foreign matter, skin breaks, cracks, scars, limbrubs, bruises, scald, hail, birds, russetting, disease, insects or mechanical or other means.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of the cherries in any lot, may be below the requirements of this grade, but not to exceed one-half of this tolerance, or 5 per cent., shall be allowed for defects causing serious damage, and not more than one-fifth of this amount, or 1 per cent., shall be allowed for cherries affected by decay.

Unclassified shall consist of fresh cherries which are not graded in conformity with the foregoing grade.

Size

In addition to the statement of grade, the size of the cherries in any lot may be specified in terms of minimum diameter or according to the number of cherries to the pound.

In order to allow for variations incident to proper packing, not more than 10 per cent., by count, of the cherries, in any lot, may vary from the size specified.

Definitions of Terms

As used in these grades:

1. "Well formed" means having the shape characteristic of the variety. Mature doubles shall be considered well formed cherries when each of the halves are evenly formed.
2. "Mature" means having reached the stage of maturity which will insure a proper completion of the ripening process.

STANDARD GRADES FOR RED SOUR CHERRIES
FOR MANUFACTURE
(Revised April 20, 1941)

U. S. No. 1 shall consist of sour cherries which are fairly well colored (1), free from decay, worms, pulled pits (2), attached stems (3), and free from damage (4) caused by bird pecks, hail marks, limbrubs, wind-

whips and other scars, sunscale, shriveling, foreign material, disease, insects, mechanical or other means.

Unless otherwise specified, each cherry shall have a diameter (5) of not less than $\frac{5}{8}$ inch.

In order to allow for variations incident to proper handling, not more than a total of 7 per cent. by weight, of any lot of cherries may fail to meet the requirements of this grade, but not more than five-sevenths of this amount, or 5 per cent., may fail to meet the grade requirements other than for attached stems, and no part of this tolerance shall be allowed for cherries which are affected by worms.

U. S. No. 2 shall consist of sour cherries which meet all of the requirements of U. S. No. 1 grade, except that a total tolerance of 12 per cent., by weight, of any lot of cherries shall be permitted for grade defects, but no more than five-sixths of this amount, or 10 per cent., may fail to meet the grade requirements other than for attached stems, and no part of this tolerance shall be allowed for cherries which are affected by worms.

Unclassified shall consist of cherries which do not meet the requirements of either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Fairly well colored" means that the individual cherry has a decidedly pink or light red color predominating over the yellow on most of its surface.
2. "Pulled pits" means cherries from which the pits have been removed in the process of harvesting.
3. "Attached stems" means cherries with stems remaining attached.
4. "Damage" means any injury or defect which materially affects the appearance or processing quality of the cherry. Light colored scars or scars which do not materially discolor the flesh beneath the skin shall not be considered as damage.
5. "Diameter" means the greatest dimension of the cherry measured at right angles to a line running from the stem end to the blossom end.

**STANDARD GRADES FOR SWEET CHERRIES
FOR SULPHUR BRINING OR PROCESSING**
(Revised May 28, 1941)

U. S. No. 1 shall consist of sweet cherries of one variety which are well formed, mature, firm, free from decay, worms, pulled pits, doubles, and free from damage caused by bruises, bird pecks, skin breaks, hail marks, windwhips, limbrubs, russetting, sunscald, scars, shriveling, foreign material, disease, mechanical or other means.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of the cherries in any lot may be below the requirements of this grade, but not to exceed one-half of this amount, or 5 per cent., shall be allowed for defects, causing serious damage, and not more than one-fifth of this amount, or 1 per cent., shall be allowed for cherries affected by decay.

Size

In addition to the statement of grade, the size of the cherries in any lot may be specified in terms of minimum diameter (6).

In order to allow for variations incident to proper sizing, not more than 10 per cent., by count, of the cherries in any lot may be below the size specified.

Definitions of Terms

As used in these standards:

1. "Well formed" means that the cherry has the shape characteristic of the variety.
2. "Mature" means that the cherries have reached the stage of maturity at which the pit will separate readily from the flesh.
3. "Doubles" means cherries which have the appearance of attached twin cherries.
4. "Damage" means any defect or injury which materially affects the quality of the fruit for brining. The following shall be considered as damage:
 - (a) Bruises, except slight bruises at the stem end.
 - (b) Rain cracks and other skin breaks which exceed $\frac{1}{4}$ inch in length, except a very thin line encircling the stem end of the fruit.
 - (c) Superficial scars, windwhips, limbrubs, russetting, and similar scars when light-colored and covering more than 15 per cent. of the surface of the cherry; or when dark colored and affecting an area of more than $\frac{1}{8}$ inch in diameter.

5. "Serious damage" means any defect or injury which seriously affects the quality of the fruit for brining. The following shall be considered as serious damage:

- (a) Cherries affected by worms.
- (b) Rain cracks and other skin breaks which exceed $\frac{1}{2}$ inch in length.
- (c) Any injury which seriously affects or causes discoloration of the flesh.

6. "Diameter" means the greatest dimension, measured through the center of the cherry, at right angles to a line running from the stem to the blossom end.

STANDARD GRADES FOR GREEN CORN

(Effective January 20, 1927)

Grades

U. S. No. 1 shall consist of ears of green corn of similar varietal characteristics which are well trimmed, well formed, and free from damage caused by smut or other disease, insects, mechanical or other means. Cobs shall be well filled with plump and milky kernels and well covered with fresh, green husks.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of any lot may be below the requirements of this grade.

U. S. Fancy shall consist of ears of green corn which meet all the requirements of U. S. No. 1 grade except that the ears shall be free from insect injury instead of free from damage caused by insect injury.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of any lot may be below the requirements of this grade.

Unclassified shall consist of green corn which is not graded in conformity with either of the foregoing grades.

Definitions of Terms

As used in these grades:

1. "Similar varietal characteristics" means that the ears in any container are of similar color and character of growth. Ears of field and sweet corn or white and yellow corn shall not be mixed in the same container.
2. "Well trimmed" means that the ears are practically free from loose husks and that the shank shall

not extend more than 1 inch beyond the point of attachment of the outside husk.

3. "Well formed" means that the ears are not stunted. Nubbins are not well formed ears.

4. "Damage" means injury from any cause which materially affects the appearance or edible quality of the ear. Ears showing worm injury extending not more than $1\frac{1}{2}$ inches from the tip of the cob shall not be regarded as damaged, but worm injury affecting kernels on other parts of the cob shall be considered as damaged.

5. "Well filled" means that the rows of kernels show fairly uniform development, and that the appearance and quantity of the edible portion of the ear are not materially affected by poorly developed rows.

6. "Plump and milky" means that the kernels are well developed, but not over mature or shriveled.

7. "Fresh" means that the husks are not badly wilted, dried, or turning yellow or brown.

STANDARD GRADES FOR SWEET CORN FOR CANNING

(Revised February 21, 1935)

U. S. No. 1 shall consist of ears of sweet corn which have similar color characteristics (1) and which are free from freezing injury and from serious damage by cross-pollination (2) and smut (3).

Unless otherwise specified, each cob shall have not less than 3 inches of its length practically filled with uninjured kernels or the equivalent of this amount, which can be salvaged in the ordinary process of commercial trimming (4).

Kernels shall be sufficiently mature but not over-mature for canning purposes and shall not be appreciably dented from over-maturity.

U. S. No. 2 shall consist of ears of sweet corn which meet the requirements of U. S. No. 1 grade except that they are appreciably dented from over-maturity.

Maturity Classifications of Husked U. S. No. 1 and U. S. No. 2 Ears

Class A shall consist of ears of sweet corn, the kernels of which are tender (5) and milky.

Class B shall consist of ears of sweet corn, the kernels of which do not meet Class A requirements

for tenderness or which have developed beyond the stage at which the kernels are milky and the exudate is of a heavy consistency, but the kernels are not appreciably dented from over-maturity.

Class C shall consist of ears of sweet corn which are appreciably dented from over-maturity.

Definitions of Terms

As used in these standards:

1. "Similar color characteristics" means that the ears of corn in any lot are of the same general color.

2. "Serious damage by cross-pollination." An ear shall be considered as seriously damaged by cross-pollination when it has more than 10 per cent. of kernels of a color which is materially different from that of the majority of kernels on the ear.

3. "Serious damage by smut." An ear shall be considered as seriously damaged by smut when a gall is broken, or will probably become broken in the ordinary process of machine husking.

4. "Uninjured kernels which can be salvaged in the ordinary process of commercial trimming." In the ordinary process of commercial trimming it is often necessary to trim away some uninjured kernels with the injured ones. As these uninjured kernels constitute a loss in commercial trimming they are considered as waste when determining the percentage of uninjured kernels which can be salvaged from a cob.

5. "Tender" means that the kernels break with only moderate pressure from the thumbnail.

STANDARDS FOR AMERICAN (EASTERN TYPE) BUNCH GRAPES

(Revised June 16, 1943)

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified.

Grades

U. S. Fancy Table Grapes shall consist of grapes of one variety which are well colored, mature, firmly attached to capstems, not shattered, split, crushed, dried, wet or soft; which are free from mold, decay, mildew, berry moth, russetting, hail, and from damage caused by freezing, disease, insects, or other means. Not less than 50 per cent. of the bunches in any container shall be compact and the remainder shall be fairly compact. Bunches shall not be excessively small, excepting that compact portions of bunches consisting of no less than five berries may be used to fill open spaces between whole bunches.

Berries of the Concord, Worden, Champion and other varieties of similar size shall have a minimum diameter of not less than nine-sixteenths of an inch, measured through the widest portion of the cross section.

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent., by weight, of the berries in any container may fail to meet the requirements of this grade, but not more than 5 per cent. shall be allowed for berries which are seriously damaged. Of this tolerance for serious damage, not more than one-fifth, or 1 per cent. shall be allowed for berries affected by mold or decay, and not over two-fifths, or 2 per cent., shall be allowed for dried berries or those affected by berry moth. In addition, not more than 5 per cent., by weight, of the bunches in any container may be straggly, and not more than one-tenth, by weight, of the bunches in any container may have more than 10 per cent. of berries which do not meet the size requirement.

U. S. No. 1 Table Grapes shall consist of grapes of one variety which are fairly well colored, mature, firmly attached to capstems, not shattered, split, crushed, dried, wet or soft, which are free from mold, decay, berry moth, and from damage caused by mildew, russetting, hail, freezing, disease, insects or other means. Not less than 85 per cent. of the bunches in any container shall be fairly compact.

Berries of the Concord, Worden, Champion and other varieties of similar size shall have a minimum diameter of not less than nine-sixteenths of an inch measured through the widest portion of the cross section.

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent., by weight, of the berries in any container may fail to meet the requirements of this grade, but

not more than 5 per cent. shall be allowed for berries which are seriously damaged. Of this tolerance for serious damage not more than two-fifths, or 2 per cent., shall be allowed for berries affected by mold or decay, and not more than two-fifths, or 2 per cent., shall be allowed for dried berries or those affected by berry moth. In addition, not more than one-tenth, by weight, of the bunches in any container may have more than 10 per cent. of berries which do not meet the size requirements.

U. S. No. 1 Juice Grapes shall consist of grapes of one variety which are fairly well colored, mature, firmly attached to capstems, not shattered, split, crushed, dried, wet or soft, which are free from mold, decay, berry moth, and from serious damage caused by mildew, russetting, hail, freezing, disease, insects or other means. Not less than 60 per cent. of the bunches in any container shall be fairly compact.

In order to allow for variations incident to proper grading and handling, not more than a total of 15 per cent., by weight, of the berries in any container may fail to meet the requirements of this grade, but not more than 6 per cent., shall be allowed for berries which are seriously damaged. Of this tolerance for serious damage not more than one-half, or 3 per cent., shall be allowed for berries affected by mold or decay, and not more than one-third, or 2 per cent., shall be allowed for dried berries or those affected by berry moth.

Any lot of grapes consisting of more than one variety which meets all other requirements of "U. S. Fancy Table", "U. S. No. 1 Table" or "U. S. No. 1 Juice" may be designated as **U. S. Fancy Table Mixed, U. S. No. 1 Table Mixed or U. S. No. 1 Juice Mixed**.

Unclassified shall consist of grapes which have not been classified in accordance with any of the foregoing grades. The term "Unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Mature" means that the grapes are juicy, palatable, and have reached that stage of development at which the skin of the berry easily separates from the pulp. Frozen, or slightly frosted stock should not be confused with mature stock.

2. "Well colored" means that the berries shall show full color characteristic of the variety.

3. "Fairly well colored" means that not less than 75 per cent., by weight, shall show full color characteristic of the variety. Twenty-five per cent. may show partially or poorly colored berries which are not characteristic of immature berries.

4. "Shattered Berries" means berries which have separated from the bunch.

5. "Compact bunches" means well-filled bunches, with no open spaces.

6. "Fairly compact" means that the bunches are well filled but that the berries are not closely spaced as in "compact bunches".

7. "Damage" means any injury which materially affects the appearance or the edible or shipping quality. Mildew which affects the appearance of the berries shall be considered as damage, but berries shall not be regarded as damaged by mildew which are firmly attached to the stems and which have only slight traces of mildew on the inside of the bunch where it does not affect the appearance of the berries.

8. "Serious damage" means that the defects taken singly or collectively seriously affect the market quality.

9. "Straggly" means a decidedly open bunch with large open spaces and very few berries. Small, immature, shotberries characteristic of the Worden variety, should be disregarded unless they are excessive in number and detract materially from the appearance of the lot.

STANDARDS FOR AMERICAN (EASTERN TYPE) BUNCH GRAPES FOR PROCESSING AND FREEZING

(Effective July 5, 1943)

U. S. No. 1 shall consist of grapes of one variety which are well colored (1), mature (2), not crushed, dried or soft; which are free from mold, decay, berry moth injury, and from serious damage (3), caused by russetting, hail, freezing, mildew, other disease, insects or other means.

In order to allow for variations incident to proper grading and handling, not more than a total of 15 per cent., by weight, of the berries may fail to meet the requirements of this grade, but not more than 6 per cent. shall be allowed for berries which are seri-

ously damaged. Of this tolerance for serious damage not more than one-half, or 3 per cent., shall be allowed for berries affected by mold or decay, and not more than one-third, or 2 per cent., shall be allowed for dried berries or those affected by berry moth.

U. S. No. 2 shall consist of grapes which meet the requirements and tolerances of U. S. No. 1 grade except that they need be only fairly well colored (4) and except that not more than 3 per cent. tolerance shall be allowed for dried berries or those affected by berry moth.

Unclassified shall consist of grapes which fail to meet the requirements of either of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Mature" means that the grapes are juicy, palatable, and have reached the stage of development at which the skin of the berry easily separates from the pulp. Frozen or slightly frosted stock should not be confused with mature stock.

2. "Well colored" means that not less than 90 per cent., by weight, of the berries show full color characteristic of the variety. Ten per cent. may show partially or poorly colored berries which are not characteristic of immature berries.

3. "Serious damage" means any injury or defect which seriously affects the processing or freezing quality.

4. "Fairly well colored" means that not less than 75 per cent., by weight, of the berries show full color characteristic of the variety. Twenty-five per cent. may show partially or poorly colored berries which are not characteristic of immature berries.

STANDARD GRADES FOR MAPLE SIRUP FOR REPROCESSING

(Effective February 15, 1940)

Numbers in parentheses following grade terms indicate where such terms are defined under Definitions of Terms.

These standards are applicable to syrup which is packed in drums or other large containers for further processing. It is not intended that they shall apply

to sirup packed in containers for table use. Another set of standards entitled "U. S. Standards for Table Maple Sirup" has been issued for this purpose.

Grades

U. S. Grade AA (Fancy) Maple Sirup for Reprocessing shall consist of maple sirup (1) which meets the following requirements:

The color shall not be darker than light amber as represented by the color standards of the United States Department of Agriculture.

The weight shall be not less than 11 pounds per gallon of 231 cubic inches at 68 degrees F. corresponding to 65.46 degrees Brix or 35.27 degrees Baume (Bureau of Standards Baume scale for sugar solutions, modulus 145).

The sirup shall possess a characteristic maple flavor, shall be free from fermentation and free from damage (2) caused by scorching, buddliness, any objectionable foreign flavor or odor or other means.

U. S. Grade A Maple Sirup for Reprocessing shall consist of maple sirup (1) which meets the requirements of U. S. Grade AA (Fancy) Maple Sirup for Reprocessing except for color.

The color shall be darker than light amber but shall not be darker than medium amber as represented by the color standards of the United States Department of Agriculture.

U. S. Grade B Maple Sirup for Reprocessing shall consist of maple sirup (1) which meets the requirements of U. S. Grade AA (Fancy) Maple Sirup for Reprocessing except for color.

The color shall be darker than medium amber but shall not be darker than dark amber as represented by the color standards of the United States Department of Agriculture.

U. S. Grade C Maple Sirup for Reprocessing shall consist of maple sirup (1) which meets the requirements of U. S. Grade AA (Fancy) Maple Sirup for Reprocessing except for color.

The color shall be darker than dark amber represented by the color standards of the United States Department of Agriculture.

Unclassified Maple Sirup for Reprocessing shall consist of maple sirup which has not been classified in accordance with the foregoing grades. The term "Unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Maple Sirup" means sirup made by the evaporation of maple sap or by the solution of maple concrete (maple sugar) and contains not more than 35 per cent. of water, and weighs not less than 11 pounds to the gallon (231 cubic inches).

2. "Damage" means any defect that materially affects the appearance or the edibility or shipping quality of the sirup.

STANDARD GRADES FOR PEACHES

(Revised April 22, 1933)

U. S. Fancy shall consist of peaches of one variety which are mature (1)*, but not soft or overripe, well formed (2); free from decay, bacterial spot, cuts which are not healed, growth cracks, hail injury, scab, scale, split pits, worms, worm holes, leaf or limb rub injury (3); and from damage (4) caused by bruises, dirt or other foreign materials, other disease, insects or mechanical or other means (4).

Each peach shall meet its varietal color requirement as follows, which is expressed in terms of percentage of the fruit surface showing red color characteristic of the variety.

50 per cent. or more:

Carmen, Early Crawford, Early Rose, Hiley, Mayflower, Red Bird (Early Wheeler), St. John, Triumph, Tuscan Cling, other similar varieties.

25 per cent. or more:

Belle of Georgia, Cumberland, Elberta, J. H. Hale, Jubilee, Late Crawford, Orange Cling, Paloro, Stump, Uneeda, other similar varieties.

15 per cent. or more:

Billyeau, Champion, Eclipse, Greensboro, Levy, Phillips, Cling, Salwey, Slappy, Smock, other similar varieties.

In order to allow for variations incident to proper grading and handling not more than 10 per cent., by count, of the peaches in any package may be below the requirements of this grade other than for color but not more than one-half of this tolerance, or 5 per cent., shall be allowed for defects causing serious damage (5) and not more than one-fifth of this amount,

* See "Definitions of Terms."

or 1 per cent., shall be allowed for decay at shipping point. An additional tolerance of 2 per cent. shall be allowed for soft or overripe peaches or decay en route or at destination. In addition, not more than 10 per cent., by count, of the fruit in any package may be below the specified color requirement.

U. S. Extra No. 1. Any lot may be designated "U. S. Extra No. 1" when the peaches meet the requirements of U. S. No. 1 grade provided that not less than 50 per cent., by count, of the peaches in any lot also meets the color requirements of U. S. Fancy Grade.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of the peaches in any package[†] may be below the requirements of the No. 1 grade, but not more than one-half of this tolerance, or 5 per cent., shall be allowed for defects causing serious damage (5) and not more than one-fifth of this amount, or 1 per cent., shall be allowed for decay at shipping point. An additional tolerance of 2 per cent. shall be allowed for soft or overripe peaches or decay en route or at destination. No part of any tolerance shall be used to reduce the percentage of peaches with U. S. Fancy color required for the lot as a whole, but individual packages may have not less than 40 per cent. which meet the color requirements of U. S. Fancy grade provided that the entire lot averages not less than 50 per cent. However, the 3 per cent. total tolerance for decay en route or at destination may be used to reduce this percentage provided there is no evidence that the decayed fruit did not meet the color requirements of U. S. Fancy at time of packing.

U. S. No. 1 shall consist of peaches of one variety which are mature (1) but not soft or overripe, well formed (2), free from decay, growth cracks, cuts which are not healed, worms, worm holes, and from damage (4) caused by bruises, dirt or other foreign

APPLICATION OF TOLERANCE. The tolerances specified for the various grades are placed on a package basis. However, any lot of peaches shall be considered as meeting the requirements of a specified grade if the entire lot averages within the tolerances specified, provided that the defects in any package based on sample inspection do not exceed the following amounts:

For a specified tolerance of 10 per cent. not more than one and one-half times the tolerance shall be allowed for any one package.

For specified tolerances of 5 per cent. or less, not more than double the tolerance shall be allowed for any one package.

materials, bacterial spot (4a), scab (4b), scale (4c), hail injury (4d), leaf or limb rubs (4e), split pits (4f), other disease, insects or mechanical or other means (4).

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of the peaches in any package may be below the requirements of this grade, but not more than one-half of this tolerance, or 5 per cent., shall be allowed for defects causing serious damage (5) and not more than one-fifth of this amount, or 1 per cent., shall be allowed for decay at shipping point. An additional tolerance of 2 per cent. shall be allowed for soft or overripe peaches or decay en route or at destination.

U. S. No. 2 shall consist of peaches of one variety which are mature (1) but not soft or overripe, not badly misshapen (6), free from decay, cuts which are not healed, worms, worm holes, and from serious damage (5) caused by bruises, dirt or other foreign materials, bacterial spot (5a), scab (5b), scale (5c), growth cracks (5d), hail injury (5e), leaf or limb rubs (5f), split pits (5g), other diseases, insects, or mechanical or other means (5).

In order to allow for variations incident to proper grading and handling not more than 10 per cent., by count, of the peaches in any package may be below the requirements of this grade, but not more than one-tenth of this tolerance, or 1 per cent., shall be allowed for decay at shipping point. An additional tolerance of 2 per cent., shall be allowed for soft or overripe peaches or decay en route or at destination.

Unclassified shall consist of peaches which are not graded in conformity with any of the foregoing grades.

Marking Requirements for Size

The minimum size, numerical count, or description of pack of the peaches in any package shall be plainly stenciled, labeled, or otherwise indicated on the package. Minimum size refers to the "diameter" (as hereinafter defined) of the smallest peach and shall be stated in terms of whole inches, whole and half inches, whole and quarter inches, or whole and eighth inches, as 2 inches minimum, 2 $\frac{1}{4}$ inches minimum, 1 $\frac{1}{8}$ inches minimum, etc., in accordance with the facts.

"Diameter" means the shortest distance measured through the center of the peach at right angles to a line running from the stem to the blossom end.

In order to allow for variations incident to proper sizing, not more than 10 per cent., by count, of the

peaches in any package may be below the specified minimum size.

Description of pack refers especially to peaches packed in six-basket carriers. When used it shall include the arrangement of the peaches in each layer in the baskets and also the total number of layers in the carrier and shall be indicated as follows: 2-1, 6 layers; 2-2, 6 layers; 3-2, 6 layers, in accordance with the facts.

Standard Pack

Each package shall be packed so that the peaches in the shown face shall be reasonably representative in size, color and quality of the contents of the package.

Baskets—Peaches packed in bushel or half-bushel round bottom baskets and tub baskets shall be ring faced and tightly packed with sufficient bulge to prevent any appreciable movement of the peaches within the packages when lidded.

Boxes—Peaches packed in the standard western boxes shall be reasonably uniform in size and arranged in the packages according to the approved and recognized methods. Each wrapped peach shall be fairly well enclosed by its individual wrapper. All packages shall be well filled and tightly packed, but the contents shall not show excessive or unnecessary bruising because of over-filled packages. The number of peaches in the box shall not vary more than 4 from the number indicated on the box.

In order to allow for variations incident to proper packing, not more than 10 per cent. of the packages in any lot may not meet these requirements.

Definitions of Terms

As used in these grades:

1. "Mature" means that the peach has reached the stage of growth which will insure a proper completion of the ripening process.

2. "Well formed" means that the peach has the shape characteristic of the variety.

3. "Leaf or limbrub injury" means that the scarring is not smooth, not light colored, or aggregates more than $\frac{1}{4}$ inch in diameter.

4. "Damage" means any injury or defect which materially affects the appearance, edible or shipping quality of the peach. Any one of the following defects, or any combination thereof, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Bacterial spot when cracked, or when aggregating more than $\frac{3}{8}$ inch in diameter.

(b) Scab spots when cracked, or when aggregating more than $\frac{3}{8}$ inch in diameter.

(c) Scale when concentrated or when scattered and aggregating more than $\frac{1}{4}$ inch in diameter.

(d) Hail injury which is unhealed, or deep, or when aggregating more than $\frac{1}{4}$ inch in diameter.

(e) Leaf or limbrubs when not smooth, or when not light colored, or when aggregating more than $\frac{1}{2}$ inch in diameter.

(f) Split pit when causing any unhealed crack, or when causing any crack which is readily apparent, or when affecting shape to the extent that fruit is not well formed.

5. "Serious damage" means any injury or defect, which seriously affects the appearance, edible or shipping quality of the peach. Any one of the following defects, or any combination thereof, the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage:

(a) Bacterial spot when any cracks are not well healed, or when aggregating more than $\frac{3}{4}$ inch in diameter.

(b) Scab spots when cracked, or when healed and aggregating more than one inch in diameter.

(c) Scale when aggregating more than $\frac{1}{2}$ inch in diameter.

(d) Growth cracks when unhealed, or more than $\frac{1}{2}$ inch in length.

(e) Hail injury when unhealed, or shallow hail injury when aggregating more than $\frac{3}{4}$ inch in diameter, or deep hail injury which seriously deforms the fruit or which aggregates more than $\frac{1}{2}$ inch in diameter.

(f) Leaf or limbrubs when smooth and light colored and aggregating more than $1\frac{1}{2}$ inches in diameter, or dark or slightly rough and barklike scars aggregating more than $\frac{3}{4}$ inch in diameter.

(g) Split pit when causing any unhealed crack, or when healed and aggregating more than $\frac{1}{2}$ inch in length including any part of the crack which may be covered by the stem.

(h) Soft or overripe peaches.

(i) Wormy fruit or worm holes.

6. "Badly misshapen" means that the peach is so decidedly deformed that its appearance is seriously affected.

**STANDARDS FOR FREESTONE PEACHES
FOR CANNING OR FREEZING
(Effective June 4, 1942)**

All percentages shall be calculated on the basis of weight.

Grades

U. S. No. 1 shall consist of peaches of one variety which are well formed (1), firm (2) or ripe (3), but not hard or overripe; free from decay, worms, worm holes, and from damage (4) by any cause. Ground color shall be not greener than the stage of turning from green to yellow, or white. (See Minimum Size.)

U. S. No. 2 shall consist of peaches of one variety which are firm (2) or ripe (3), but not hard or overripe; free from decay, worms, worm holes, and from serious damage (5) by any cause. (See Minimum Size.)

Unclassified shall consist of peaches which have not been classified in accordance with the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Minimum Size

The minimum sizes for U. S. No. 1 and U. S. No. 2 grades may be fixed by agreement between buyer and seller. Size shall be stated in terms of diameter, which means the shortest distance measured through the center of the peach at right angles to a line running from the stem to the blossom end. Peaches below any specified minimum size shall be designated as "Unclassified."

Tolerances

In the application of these standards it is contemplated that in most instances sellers will not sort their peaches into separate lots of U. S. No. 1 and U. S. No. 2 grades before delivery to the buyer, and that the buyer will pay on the basis of the amount of each grade in the lot as determined by inspection. In such cases, there is no need for a tolerance. If the contract between buyer and seller calls for the delivery of lots containing only one grade such as U. S. No. 1, or U. S. No. 2, then, unless otherwise specified, a 10 per cent. tolerance shall be allowed for peaches which fail to meet the requirements of the grade upon which the contract is based and an additional 10 per cent. shall be allowed for peaches which fail to meet the specified minimum size.

Definitions of Terms

As used in these standards:

1. "Well formed" means that the peach is of such shape that it will yield two reasonably well shaped halves.
2. "Firm" means that the peach is fairly solid and yields slightly to moderate pressure.
3. "Ripe" means that the peach yields readily to slight pressure, and is at the most desirable stage of maturity for immediate processing.
4. "Damage" means any injury or defect which materially affects the processing quality of the peach, or causes waste to the extent that the fruit, after trimming, will not yield two reasonably well shaped halves.
5. "Serious damage" means any injury or defect which seriously affects the processing quality of the peach, or causes waste of more than 20 per cent., by weight, of the flesh in excess of that which would occur if the peach were not defective.

STANDARD GRADES FOR CANNING PEAS

(Effective June 15, 1936)

The official Pennsylvania standards for the classification of garden peas (*Pisum Sativum*) for canning, are as follows:

Pennsylvania Fancy shall consist of peas of similar varietal characteristics which are very succulent and tender, (1) free from starchiness, tough skins, scald, shriveling and from embryonic development. Raw peas of this grade when properly processed should produce canned peas of U. S. Grade A or (Fancy).

Pennsylvania Extra Standard shall consist of peas of similar varietal characteristics which are fairly succulent and tender (2), fairly free from starchiness, tough skins, scald, shriveling and from embryonic development. Raw peas of this grade when properly processed should produce canned peas of U. S. Grade B or (Extra Standard).

Pennsylvania Standard shall consist of peas of similar varietal characteristics which are slightly succulent and tender (3), free from scald, shriveling and from excessive embryonic development. Raw peas of this grade when properly processed should produce canned peas of U. S. Grade C or (Standard).

Sub-Standard shall consist of peas which do not meet the requirements of any of the foregoing grades.

(1) Pennsylvania Fancy peas should float in a 40% brine solution.

(2) Pennsylvania Extra Standard peas should float in a 50% brine solution.

(3) Pennsylvania Standard peas should float in a 60% brine solution.

STANDARD GRADES FOR SUMMER AND FALL PEARS

Such as Bartlett, Hardy, and Other Similar Varieties
(Effective June 27, 1940)

Numbers and letter in parentheses following grade terms indicate where such terms are defined under Definitions of Terms.

When the numerical count is marked on the container, percentages shall be calculated on the basis of count.

When the minimum diameter or minimum and maximum diameters are marked on the container, percentages shall be calculated on the basis of weight.

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified, provided at least one specimen which does not meet the requirements shall be allowed in any one package.

Grades

U. S. No. 1 shall consist of pears of one variety which are mature (1), but not overripe (2), carefully handpicked (3), clean (4), fairly well formed (8), free from decay, internal breakdown, scald, freezing injury, worm holes, black end (6), and from damage (9) caused by hard end (9a), bruises (9b), broken skins (9c), russetting (9d), limbrubs (9e), hail (9f), scars (9f), drought spot (9g), sunburn (9i), spray-

burn (9i), stings or other insect injury (9j), disease (9k), or mechanical or other means (9). (See Tolerances and Condition After Storage or Transit.)

U. S. No. 2 shall consist of pears of one variety which are mature (1), but not overripe (2), carefully handpicked (3), clean (4), not seriously misshapen (10), free from decay, internal breakdown, scald, freezing injury, worm holes, black end (6), and from damage (9), caused by hard end (9a), or broken skins (9c). The pears shall also be free from serious damage (11) caused by bruises, russetting (11d), limbrubs (11e), hail (11f), scars (11f), drought spot (11h), sunburn (11j), sprayburn (11i), stings or other insect injury (11j), disease (11k), or mechanical or other means (11). (See Tolerances and Condition After Storage or Transit.)

U. S. Combination Grade. A combination of U. S. No. 1 and U. S. No. 2 may be packed. When such a combination is packed, at least 50 per cent. of the pears in any container shall meet the requirements of U. S. No. 1 (See Tolerances and Condition After Storage or Transit.)

Unclassified shall consist of pears which have not been classified in accordance with any of the foregoing grades. The term "Unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Mature" means that the pear has reached the stage of maturity which will insure the proper completion of the ripening process.

Before a mature pear becomes overripe it will show varying degrees of firmness depending upon the state of the ripening process. Therefore, a statement of firmness should be given in order to indicate the stage of the ripening process. A description of the ground color should also be given.

The following terms should be used for describing the ground color: "Green," "Light Green," "Yellowish Green," and "Yellow."

The following terms should be used for describing the firmness of pears:

"Hard" means that the flesh of the pear is solid and does not yield appreciably even to considerable pressure. Such pears are in suitable condition for long storage period for the variety.

"Firm" means that the flesh of the pear is fairly solid but yields somewhat to moderate pressure. The ripening process in firm pears is further advanced than in hard pears and they cannot be held in storage as long.

"Firm Ripe" means that the flesh of the pear yields readily to moderate pressure. Such a pear is approaching the stage at which it is in prime eating condition but may be held for a brief period.

"Ripe" means that the pear is at the state where it is in its most desirable condition for eating.

2. "Overripe" means dead ripe, very mealy or soft, past commercial utility.

3. "Carefully handpicked" means that the pears do not show evidence of rough handling or of having been on the ground.

4. "Clean" means free from excessive dirt, dust, spray residue or other foreign material.

6. "Black end" is evidenced by an abnormally deep green color around the calyx, or black spots usually occurring on the one-third of the surface nearest to the calyx, or by an abnormally shallow calyx cavity.

8. "Fairly well formed" means that the pear may be slightly abnormal in shape but not to an extent which detracts materially from the appearance of the fruit.

9. "Damage" means any injury or defect which materially affects the appearance, edible or shipping quality.

(9a) Hard end, if the pear shows a distinctly constricted protrusion at the blossom end, or an abnormally yellow color at the blossom end, or an abnormally smooth rounded base with little or no depression at the calyx, or if the flesh near the calyx is abnormally dry and tough or woody.

(9b) Slight handling bruises and package bruises such as are incident to good commercial handling in the preparation of a tight pack shall not be considered damage.

(9c) Any pear with one skin break larger than $\frac{3}{16}$ inch in diameter or depth, or with more than one skin break $\frac{1}{8}$ inch or larger in diameter or depth, shall be considered damaged, and scored against the grade tolerance.

Small inconspicuous skin breaks, less than $\frac{1}{8}$ inch in diameter or depth, shall not be considered damage. In addition, not more than 15 per cent. of the pears

in any container may have not more than one skin break from $\frac{1}{8}$ inch to $\frac{3}{16}$ inch, inclusive, in diameter or depth.

(9d) Russetting which exceeds the following shall be considered as damage:

On all varieties excessively rough russetting (russetting which shows "frogging" or slight cracking) when the aggregate area exceeds $\frac{1}{2}$ inch in diameter.

On Bartlett and other smooth-skinned varieties slightly rough russetting, or thick russetting such as is characteristic of frost injury, when the aggregate area exceeds $\frac{3}{4}$ inch in diameter.

On Bartlett and other smooth-skinned varieties, smooth solid or smooth netlike russetting when the aggregate area exceeds 15 per cent. of the surface.

On Hardy, Sand and other similar varieties, rough or thick russetting such as is characteristic of frost injury, when the aggregate area exceeds $\frac{3}{4}$ inch in diameter. On any of these varieties any amount of characteristic russetting is permitted whether due to natural causes such as weather or stimulated by artificial means; leaf whips or light limbrubs which resemble and blend into russeted areas shall be considered as russet.

Any of the following defects or any combination thereof, the seriousness of which exceeds the maximum allowed for any one defect shall be considered as damage:

(9e) Any limbrubs which are cracked, softened, or more than slightly depressed.

Black discoloration caused by limbrubs which exceeds an aggregate area of $\frac{3}{8}$ inch in diameter.

Dark brown discoloration or excessive roughness caused by limbrubs which exceeds an aggregate area of $\frac{1}{2}$ inch in diameter.

Slightly rough, light colored discoloration caused by limbrubs which exceeds an aggregate area of $\frac{3}{4}$ inch in diameter.

Smooth, light colored discoloration caused by limbrubs which exceeds an aggregate area of 1 inch in diameter.

(9f) Hail marks or other similar depressions or scars which are not shallow or superficial, or where the injury affects an aggregate area of more than $\frac{3}{8}$ inch in diameter.

(9g) Drought spot when more than one in number, or when the external injury exceeds an aggregate area of $\frac{3}{8}$ inch in diameter, or when the appearance of the flesh is materially affected by corky tissue or brownish discoloration.

(9i) Sunburn or sprayburn where the skin is blistered, cracked, or shows any light tan or brownish color, or the shape of the pear is appreciably flattened, or the flesh is appreciably softened or changed in color, except that sprayburn of a russet character shall be considered under the definition of russetting (9d).

(9j) Insects.

More than two healed codling moth stings, or any insect sting which is over 3/32 of an inch in diameter, or other insect stings affecting the appearance to an equal extent.

Blister mite or canker worm injury which is not shallow or superficial, or where the injury affects an aggregate area of more than $\frac{3}{8}$ inch in diameter.

(9k) Disease.

Scab spots which are black and which cover an aggregate area of more than $\frac{1}{8}$ inch in diameter except that scab spots of a russet character shall be considered under the definition of russetting (9d).

Sooty blotch which is thinly scattered over more than 5 per cent. of the surface, or dark, heavily concentrated spots which affect an area of more than $\frac{3}{8}$ inch in diameter.

10. "Seriously misshapen" means that the pear is excessively flattened or elongated for the variety, or is constricted or deformed so it will not cut three fairly uniform good quarters, or is so badly misshapen that the appearance is seriously affected.

11. "Serious damage" means any injury or defect which seriously affects the appearance, edible or shipping quality.

(11d) Russetting which in the aggregate exceeds the following shall be considered as serious damage:

On all varieties, excessively rough russetting (russetting which shows "frogging" or slight cracking) when the aggregate area exceeds $\frac{3}{4}$ inch in diameter.

On all varieties thick russetting such as is characteristic of frost injury, 15 per cent. of the surface.

Any one of the following defects or combination thereof, the seriousness of which exceeds the minimum allowed for any one defect shall be considered as serious damage:

(11e) Limbrubs which are more than slightly cracked, or excessively rough limbrubs or dark brown or black discoloration caused by limbrubs which exceeds an aggregate area of $\frac{3}{4}$ inch in diameter

Other limbrubs which affect an aggregate area of more than one-tenth of the surface.

(11f) Hail marks or other similar depressions or scars which affect an aggregate area of more than $\frac{3}{4}$ inch in diameter, or which materially deform or disfigure the fruit.

(11h) Drought spot when more than two in number, or where the external injury affects an aggregate area of more than $\frac{3}{4}$ inch in diameter, or when the appearance of the flesh is seriously affected by corky tissue or brownish discoloration.

(11i) Sunburn or sprayburn where the skin is blistered, cracked or shows any brownish color, or where the shape of the pear is materially flattened, or the flesh is softened or materially changed in color, except that sprayburn of a russet character shall be considered under the definition of russetting (11d).

(11j) Insects.

Worm holes.

More than three healed codling moth stings, of which not more than two may be over 3/32 inch in diameter, or other insect stings affecting the appearance to an equal extent.

Blister mite or canker worm injury which affects an aggregate area of more than $\frac{3}{4}$ inch in diameter or which materially deforms or disfigures the fruit.

(11k) Scab spots which are black and which cover an aggregate area of more than one-fourth inch in diameter, except that scab spots of a russet character shall be considered under the definition of russetting (11d).

Sooty blotch which is thinly scattered over more than 15 per cent. of the surface, or dark, heavily concentrated spots which affect an area of more than $\frac{3}{4}$ inch in diameter.

Tolerances for Preceding Grades

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent. of the pears in any container may be below the requirements of grade, provided that not more than 5 per cent. shall be seriously damaged by insects, and not more than 1 per cent. shall be allowed for decay or internal breakdown.

When applying the foregoing tolerances to the combination grade no part of any tolerance shall be used to reduce the percentage of U. S. No. 1 pears required in the combination, but individual containers may have not more than 10 per cent. less than the per-

centage of U. S. No. 1 required, provided that the entire lot averages within the percentages specified.

Condition After Storage or Transit

Decay, scald or other deterioration which may have developed on pears after they have been in storage or transit shall be considered as affecting condition and not the grade.

Standard Pack

Sizing

The numerical count, or the minimum size of the pears packed in closed containers shall be indicated on the package. The number of pears in the box shall not vary more than 3 from the number indicated on the box.

When the numerical count is marked on western standard or special pear boxes the pears shall not vary more than $\frac{3}{8}$ inch in their transverse diameter for counts 120 or less; $\frac{1}{4}$ inch for counts 135 to 180, inclusive; and $\frac{3}{16}$ inch for counts 193 or more.

When the numerical count is marked on western standard half boxes or special half boxes packed three tiers deep, the pears shall not vary more than $\frac{1}{4}$ inch for counts 90 or less, and $\frac{3}{16}$ inch for counts 100 or more.

When the numerical count is marked on western standard half boxes or special half boxes packed two tiers deep, the pears shall not vary more than $\frac{3}{8}$ inch for counts of 50 or less; $\frac{1}{4}$ inch for counts 55 to 60, inclusive; and $\frac{3}{16}$ inch for counts 65 or more.

When the numerical count is not shown, the minimum size shall be plainly stamped, stenciled or otherwise marked on the container in terms of whole inches, whole and half inches, whole and quarter inches, or whole and eighth inches, as $2\frac{1}{2}$ inches minimum, $2\frac{1}{4}$ inches minimum, or $2\frac{5}{8}$ inches minimum, in accordance with the facts. It is suggested that both minimum and maximum sizes be marked on the container, as $2\frac{1}{4}$ to $2\frac{3}{4}$ inches, $2\frac{1}{2}$ to $2\frac{3}{4}$ inches, as such marking is especially desirable for pears marketed in the export trade.

"Size" means the greatest transverse diameter of the pear taken at right angles to a line running from the stem to the blossom end.

Packing

Each package shall be packed so that the pears in the shown face shall be reasonably representative in size and quality of the contents of the package.

Pears packed in any container shall be tightly packed. All packages shall be well filled but the contents shall not show excessive or unnecessary bruising because of overfilled packages.

Pears packed in boxes shall be arranged in containers according to the approved and recognized methods with the pears packed lengthwise. A bridge shall not be allowed in any standard pack. When wrapped each pear shall be fairly well enclosed by its individual wrapper.

Pears packed in round stave bushel baskets, tubs or in barrels shall be ring faced.

Tolerances for Standard Pack

In order to allow for variations incident to proper sizing, not more than 5 per cent. of the pears in any container may not meet the size requirements provided that, when the maximum and minimum sizes are both stated, an additional 10 per cent. tolerance shall be allowed for pears which are larger than the maximum size stated.

In order to allow for variations incident to proper packing, not more than 10 per cent. of the containers in any lot may not meet these requirements, but no part of this tolerance shall be allowed for bridge packs, or for packs with different sizes and arrangements such as layers of 195 size and arrangement, and layers of 180 size and arrangement packed in the same box.

STANDARD GRADES FOR WINTER PEARS

Such as Anjou, Bosc, Winter Nellis, Comice,
and other similar varieties

(Effective July 8, 1940)

Numbers and letters in parentheses following grade terms indicate where such terms are defined under Definitions of Terms.

When the numerical count is marked on the container, percentages shall be calculated on the basis of count.

When the minimum diameter or minimum and maximum diameters are marked on the container, percentages shall be calculated on the basis of weight.

When the pears are in bulk, percentages shall be calculated on the basis of weight.

The tolerances for the standards are on a container basis. However, individual packages, in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based

on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified, provided at least one specimen which does not meet the requirements shall be allowed in any one package.

Grades

U. S. Extra No. 1 shall consist of pears of one variety which are mature (1), but not overripe (2), carefully handpicked (3), clean (4), well formed (5), free from decay, internal breakdown, scald, freezing injury, worm holes, black end (6), hard end, drought spot, and free from injury (7) caused by russetting (7d), limbrubs (7e), hail (7f), scars (7f), cork spot (7g), sunburn (7i), sprayburn (7l), stings or other insect injury (7j) or mechanical or other means (7), except that they shall be free from damage (9) caused by bruises (9b), broken skins (9c), or disease (9k). (See Tolerances and Condition After Storage or Transit, page 71.)

U. S. No. 1 shall consist of pears of one variety which are mature (1), but not overripe (2), carefully handpicked (3), clean (4), fairly well formed (8), free from decay, internal breakdown, scald, freezing injury, worm holes, black end (6), and from damage (9) caused by hard end (9a), bruises (9b), broken skins (9c), russetting (9d), limhrubs (9e), hail (9f), scars (9f), cork spot (9g), drought spot (9h), sunburn (9i), sprayburn (9l), stings or other insect injury (9j), disease (9k), or mechanical or other means (9). (See Tolerances and Condition After Storage or Transit, page 71.)

U. S. No. 2 shall consist of pears of one variety which are mature (1), but not overripe (2), carefully handpicked (3), clean (4), not seriously misshapen (10), free from decay, internal breakdown, scald, freezing injury, worm holes, black end (6), and from damage (9) caused by hard end (9a), or broken skins (9c). The pears shall also be free from serious damage (11), caused by bruises, russetting (11d), limbrubs (11e), hail (11f), scars (11f), cork spot (11g),

drought spot (11h), sunburn (11i), sprayburn (11i), stings or other insect injury (11j), disease (11k), or mechanical or other means (11). (See Tolerances and Condition After Storage or Transit, page 71.)

U. S. Combination Grade. A Combination of U. S. No. 1 and U. S. No. 2 may be packed. When such a combination is packed, at least 50 per cent. of the pears in any container shall meet the requirements of U. S. No. 1. (See Tolerances and Condition After Storage or Transit, page 71.)

Unclassified shall consist of pears which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Mature" means that the pear has reached the stage of maturity which will insure the proper completion of the ripening process.

Before a mature pear becomes overripe it will show varying degrees of firmness depending upon the stage of the ripening process. Therefore, a statement of firmness should be given in order to indicate the stage of the ripening process. A description of the ground color should also be given.

The following terms should be used for describing the ground color: "Green," "Light Green," or "Yellowish Green," and "Yellow."

The following terms should be used for describing the firmness of pears:

"Hard" means that the flesh of the pear is solid and does not yield appreciably even to considerable pressure. Such pears are in suitable condition for long storage period for the variety.

"Firm" means that the flesh of the pear is fairly solid but yields somewhat to moderate pressure. The ripening process in firm pears is further advanced than in hard pears and they cannot be held in storage as long. Winter varieties at the firm stage may be held longer than the early varieties.

"Firm Ripe" means that the flesh of the pear yields readily to moderate pressure. Such a pear is approaching the stage at which it is in prime eating condition but may be held for a brief period although winter varieties can be held longer than the early varieties.

"Ripe" means that the pear is at the stage where it is in its most desirable condition for eating.

2. "Overripe" means dead ripe, very mealy or soft, past commercial utility.

3. "Carefully handpicked" means that the pears do not show evidence of rough handling or of having been on the ground.

4. "Clean" means free from excessive dirt, dust, spray residue or other foreign material.

5. "Well formed" means having the shape characteristic of the variety. Slight irregularities of shape from type which do not appreciably detract from the general appearance of the fruit shall be considered well formed.

6. "Black end" is evidenced by an abnormally deep green color around the calyx, or black spots usually occurring on the one-third of the surface nearest to the calyx, or by an abnormally shallow calyx cavity.

7. "Injury" means any blemish or defect that more than slightly affects the appearance, edible or shipping quality. The following shall be considered as injury:

(7d) Russetting which exceeds the following shall be considered as injury:

On all varieties any excessively rough russetting (russetting which shows "frogging" or slight cracking).

On Comice, and on Anjou and other smooth-skinned varieties, slightly rough russetting, or thick russetting such as is characteristic of frost injury, when the aggregate area exceeds $\frac{1}{2}$ inch in diameter.

On Anjou and other smooth-skinned varieties, smooth solid russetting when the aggregate area exceeds $\frac{1}{2}$ inch in diameter and smooth netlike russetting when the aggregate area exceeds 15 per cent. of the surface, and on Comice, smooth solid or smooth netlike russetting when the aggregate area exceeds one-third of the surface, except that, in addition, on these and similar varieties, any amount of characteristic smooth russetting shall be permitted on that portion of the calyx end not visible for more than $\frac{1}{2}$ inch along the contour of the pear, when it is placed calyx end down on a flat surface.

On any of the following and other similar varieties, rough or thick russetting such as is characteristic of frost injury when the aggregate area exceeds $\frac{1}{2}$ inch in diameter. On any of these varieties any amount of characteristic russetting is permitted whether due to natural causes such as weather or simulated by

artificial means; leaf whips or light limbrubs which resemble and blend into russeted areas shall be considered as russet:

Bosc	Pound
Clairgeau	Seckel
Easter Beurre	Sheldon
Kieffer	Winter Nelis, and other
P. Barry	similar varieties

Any one of the following defects or any combination thereof, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered an injury:

(7e) Limbrubs which are cracked, softened, more than very slightly depressed, not light in color, or exceeding an aggregate area of $\frac{3}{4}$ inch in diameter.

(7f) Hall marks or other similar depressions or scars which are not very shallow or superficial, or which affect an aggregate area of more than $\frac{1}{4}$ inch in diameter.

(7g) Cork spot when a pear shows depressions or other external evidence of the disease.

(7i) Sunburn or sprayburn if the normal color of the fruit has been materially changed, or if the skin is blistered or cracked, or the flesh softened or discolored.

(7j) More than two healed slight stings or depressions, or any stings which materially affect the general appearance of the fruit.

Blister mite or canker worm injury which is not very shallow and superficial or where the injury affects an aggregate area of more than $\frac{1}{4}$ inch.

8. "Fairly well formed" means that the pear may be slightly abnormal in shape but not to an extent which detracts materially from the appearance of the fruit. Winter Nelis pears with characteristic slight sutures or with slight flattening on one side and/or other slight irregularities which do not materially detract from the general appearance of the pear shall be considered fairly well formed.

9. "Damage" means any injury or defect which materially affects the appearance, edible or shipping quality.

(9a) Hard end, if the pear shows an abnormally yellow color at the blossom end, or an abnormally smooth rounded base with little or no depression at the calyx, or if the flesh near the calyx is abnormally dry and tough or woody.

(9b) Slight handling bruises and package bruises such as are incident to good commercial handling in

the preparation of a tight pack shall not be considered damage.

(9c) Any pear with one skin break larger than $\frac{3}{16}$ inch in diameter or depth, or with more than one skin break $\frac{1}{8}$ inch or larger in diameter or depth, shall be considered damaged, and scored against the grade tolerance.

Small inconspicuous skin breaks, less than $\frac{1}{8}$ inch in diameter or depth, shall not be considered damage. In addition, not more than 15 per cent. of the pears in any container may have not more than one skin break from $\frac{1}{8}$ inch to $\frac{3}{16}$ inch, inclusive, in diameter or depth.

(9d) Russetting which exceeds the following shall be considered as damage:

On all varieties excessively rough russetting (russetting which shows "frogging" or slight cracking) when the aggregate area exceeds $\frac{1}{2}$ inch in diameter.

On Anjou and other smooth-skinned varieties, slightly rough russetting, or thick russetting such as is characteristic of frost injury, when the aggregate area exceeds $\frac{3}{4}$ inch in diameter.

On Anjou, smooth solid or smooth netlike russetting when the aggregate area exceeds one-third of the surface, and on other smooth-skinned varieties, 15 per cent. of the surface, except that, in addition, on Anjou and other smooth-skinned varieties, any amount of characteristic smooth russetting shall be permitted on that portion of the calyx end not visible for more than $\frac{1}{2}$ inch along the contour of the pear, when it is placed calyx end down on a flat surface.

On any of the following and other similar varieties, rough or thick russetting such as is characteristic of frost injury, when the aggregate area exceeds $\frac{3}{4}$ inch in diameter. On any of these varieties any amount of characteristic russetting is permitted whether due to natural causes such as weather or stimulated by artificial means; leaf whips or light limbrubs which resemble and blend into russeted areas shall be considered as russet:

Bosc	Pound
Clairgeau	Seckel
Comice	Sheldene
Easter Beurre	Winter Nelis, and other
Kieffer	similar varieties
P. Barry	

Any one of the following defects or any combination thereof, the seriousness of which exceeds the maxi-

mum allowed for any one defect shall be considered as damage:

(9e) Any limbrubs which are cracked, softened or more than slightly depressed.

Black discoloration caused by limbrubs which exceeds an aggregate area of $\frac{3}{8}$ inch in diameter.

Dark brown discoloration or excessive roughness caused by limbrubs which exceeds an aggregate area of $\frac{1}{2}$ inch in diameter.

Slightly rough, light colored discoloration caused by limbrubs which exceeds an aggregate area of $\frac{3}{4}$ inch in diameter.

Smooth, light colored discoloration caused by limbrubs which exceeds an aggregate area of 1 inch in diameter.

(9f) Hail marks or other similar depressions or scars which are not shallow or superficial, or where the injury affects an aggregate area of more than $\frac{3}{8}$ inch in diameter.

(9g) Cork spots, when more than one in number visible externally, or when the visible external injury affects an area of more than $\frac{3}{8}$ inch in diameter.

(9h) Drought spot when more than one in number, or when the external injury exceeds an aggregate area of $\frac{3}{8}$ inch in diameter, or when the appearance of the flesh is materially affected by corky tissue or brownish discoloration.

(9i) Sunburn or sprayburn where the skin is blistered, cracked, or shows any light tan or brownish color, or the shape of the pear is appreciably flattened, or the flesh is appreciably softened or changed in color, except that sprayburn of a russet character shall be considered under the definition of russetting (9d).

(9j) Insects.

More than two healed codling moth stings, or any insect sting which is over $3/32$ of an inch in diameter, or other insect stings affecting the appearance to an equal extent.

Blister mite or canker worm injury which is not shallow or superficial, or where the injury affects an aggregate area of more than $\frac{3}{8}$ inch in diameter.

(9k) Disease.

Scab spots which are black and which cover an aggregate area or more than $\frac{1}{8}$ inch in diameter, except that scab spots of a russet character shall be considered under the definition of russetting (9d).

Sooty blotch which is thinly scattered over more than 5 per cent. of the surface, or dark, heavily concentrated

spots which affect an area of more than $\frac{3}{8}$ inch in diameter.

10. "Seriously misshapen" means that the pear is excessively flattened or elongated for the variety, or is constricted or deformed so it will not cut three fairly uniform good quarters, or is so badly misshapen that the appearance is seriously affected.

11. "Serious damage" means any injury or defect which seriously affects the appearance, edible or shipping quality.

(11d) Russetting which in the aggregate exceeds the following shall be considered as serious damage:

On all varieties, excessively rough russetting (russetting which shows "frogging" or slight cracking) when the aggregate area exceeds $\frac{3}{4}$ inch in diameter.

On all varieties, thick russetting such as is characteristic of frost injury, 15 per cent. of the surface.

On Anjou, smooth solid or smooth netlike russetting when the aggregate area exceeds two-thirds of the surface, except that, in addition, any amount of characteristic smooth russetting shall be permitted on that portion of the calyx end not visible for more than $\frac{1}{2}$ inch long the contour of the pear, when it is placed calyx end down on a flat surface.

Any one of the following defects or combination thereof, the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage:

(11e) Limbrubs which are more than slightly cracked, or excessively rough limbrubs or dark brown or black discoloration caused by limbrubs which exceeds an aggregate area of $\frac{3}{4}$ inch in diameter.

Other limbrubs which affect an aggregate area of more than one-tenth of the surface.

(11f) Hail marks or other similar depressions or scars which affect an aggregate area of more than $\frac{3}{4}$ inch in diameter, or which materially deform or disfigure the fruit.

(11g) Cork spot, when more than two in number visible externally, or when the visible external injury effects an aggregate area of more than $\frac{1}{2}$ inch in diameter.

(11h) Drought spot when more than two in number, or where the external injury affects an aggregate area of more than $\frac{3}{4}$ inch in diameter, or when the appearance of the flesh is seriously effected by corky tissue or brownish discoloration.

(11i) Sunburn or sprayburn where the skin is blistered, cracked or shows any brownish color, or where the shape of the pear is materially flattened, or the flesh is softened or materially changed in color, except that sprayburn of a russet character shall be considered under the definition of russetting (11d).

(11j) Insects.

Worm holes.

More than three healed codling moth stings, of which not more than two may be over $3/32$ inch in diameter, or other insect stings affecting the appearance to an equal extent.

Blister mite or canker worm injury which affects an aggregate area of more than $\frac{3}{4}$ inch in diameter or which materially deforms or disfigures the fruit.

(11k) Disease.

Scab spots which are black, and which cover an aggregate area of more than $\frac{1}{4}$ inch in diameter, except that scab spots of a russet character shall be considered under the definition of russetting (11d).

Sooty blotch which is thinly scattered over more than 15 per cent. of the surface, or dark heavily concentrated spots which affect an area of more than $\frac{3}{4}$ inch in diameter.

Tolerances for Preceding Grades

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent. of the pears in any containers may be below the requirements of grade, provided that not more than 5 per cent. shall be seriously damaged by insects, and not more than 1 per cent. shall be allowed for decay or internal breakdown.

When applying the foregoing tolerances to the combination grade no part of any tolerance shall be used to reduce the percentage of U. S. No. 1 pears required in the combination, but individual containers may have not more than 10 per cent. less than the percentage of U. S. No. 1 required, provided that the entire lot averages within the percentage specified.

Condition After Storage or Transit

Decay, scald, or other deterioration which may have developed on pears after they have been in storage or transit shall be considered as affecting condition and not the grade.

Standard Pack**Sizing**

The numerical count, or the minimum size of the pears packed in closed containers shall be indicated on the package. The number of pears in the box shall not vary more than 3 from the number indicated on the box.

When the numerical count is marked on western standard or special pear boxes the pears shall not vary more than $\frac{3}{8}$ inch in their transverse diameter for counts 120 or less; $\frac{1}{4}$ inch for counts 135 to 180, inclusive; and $\frac{3}{16}$ inch for counts 193 or more.

When the numerical count is marked on western standard half boxes or special half boxes three tiers deep, the pears shall not vary more than $\frac{1}{4}$ inch for counts 90 or less and $\frac{3}{16}$ inch for counts 100 or more.

When the numerical count is marked on western standard half boxes or special half boxes packed two tiers deep, the pears shall not vary more than $\frac{3}{8}$ inch for counts 50 or less; $\frac{1}{4}$ inch for counts 55 to 60, inclusive; and $\frac{3}{16}$ inch for counts 65 or more.

When the numerical count is not shown, the minimum size shall be plainly stamped, stenciled or otherwise marked on the container in terms of whole inches, whole and half inches, whole and quarter inches, or whole and eighth inches, as $2\frac{1}{2}$ inches minimum, $2\frac{1}{4}$ inches minimum, or $2\frac{5}{8}$ inches minimum, in accordance with the facts. It is suggested that both minimum and maximum sizes be marked on the container, as $2\frac{1}{4}$ to $2\frac{3}{4}$ inches, $2\frac{1}{2}$ to $2\frac{3}{4}$ inches, as such marking is especially desirable for pears marketed in the export trade.

"Size" means the greatest transverse diameter of the pear taken at right angles to a line running from the stem to the blossom end.

Packing

Each package shall be packed so that the pears in the shown face shall be reasonably representative in size and quality of the contents of the package.

Pears packed in any container shall be tightly packed. All packages shall be well filled but the contents shall not show excessive or unnecessary bruising because of overfilled packages.

Pears packed in boxes shall be arranged in containers according to the approved and recognized methods with the pears packed lengthwise. A bridge shall not be allowed in any standard pack. When wrapped each pear shall be fairly well enclosed by its individual wrapper.

Pears packed in round stave bushel baskets, tubs or in barrels shall be ring faced.

Tolerances for Standard Pack

In order to allow for variations incident to proper sizing, not more than 5 per cent. of the pears in any container may not meet the size requirements provided that, when the maximum and minimum sizes are both stated, an additional 10 per cent. tolerance shall be allowed for pears which are larger than the maximum size stated.

In order to allow for variations incident to proper packing not more than 10 per cent. of the containers in any lot may not meet these requirements, but no part of this tolerance shall be allowed for bridge packs, or for packs with different sizes and arrangements such as layers of 195 size and arrangement, and layers 180 size and arrangement packed in the same box.

**STANDARD GRADES FOR PLUMS AND PRUNES
(FRESH)**

(Revised June 3, 1937)

The tolerances for the standards are on a container basis. However, individual packages in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual packages in any lot may contain not more than one and one-half times the tolerance specified, except that when the package contains 15 specimens or less, individual packages may contain not more than double the tolerance specified.

For a tolerance of less than 10 per cent., individual packages in any lot may contain not more than double the tolerance specified, provided at least one specimen which does not meet the requirements shall be allowed in any one package.

Grades

U. S. Fancy shall consist of plums or prunes of one variety which are well formed; mature but not soft, overripe, or shriveled; which are free from decay, hail marks, sunburn, split pits, unhealed broken skins (except those caused by pulled stems where the skin is not torn beyond the stem basin), and from damage caused by dirt or other foreign material, growth cracks, drought, russetting, scars, disease, insects or mechanical or other means. Italian type prunes shall

be well colored and, UNLESS OTHERWISE SPECIFIED, the minimum size of such prunes shall be not less than $1\frac{1}{8}$ inches in diameter.

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent., by count, of the plums or prunes in any container may not meet the requirements of this grade for defects other than color and size of Italian type prunes but not more than 5 per cent., by count, may be allowed for defects causing serious damage and not more than 1 per cent. may be allowed for decay. In addition, not more than 10 per cent., by count, of the Italian type prunes in any container may not meet the color requirements, and not more than 10 per cent., by count, may not meet the size specifications, but the combined tolerance for all defects shall not exceed 15 per cent.

U. S. No. 1 shall consist of plums or prunes of one variety which are well formed; mature but not soft, overripe, or shriveled; which are free from decay, unhealed broken skins (except those caused by pulled stems where the skin is not torn beyond the stem basin) and from damage caused by dirt or other foreign material, growth cracks, sunburn, split pits, hail, drought, russetting, scars, disease, insects, or mechanical or other means. Italian type prunes shall be fairly well colored and, UNLESS OTHERWISE SPECIFIED, the minimum size of such prunes shall be not less than $1\frac{1}{8}$ inches in diameter.

In order to allow for variations incident to proper grading and handling, not more than a total of 10 per cent., by count, of the plums or prunes in any container may not meet the requirements of this grade for defects other than color and size of Italian type prunes but not more than 5 per cent., by count, may be allowed for defects causing serious damage and not more than 1 per cent. may be allowed for decay. In addition, not more than 10 per cent., by count, of the Italian type prunes in any container may not meet the color requirements and not more than 10 per cent., by count, may not meet the size specifications, but the combined tolerance for all defects shall not exceed 15 per cent.

U. S. No. 2 shall consist of plums or prunes of one variety which are mature but not soft, overripe, or shriveled, which are free from decay and from serious damage by any means.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by

count, of the plums or prunes in any container may be below the requirements of this grade.

Unclassified shall consist of plums or prunes which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Standard Pack

The plums or prunes shall be fairly uniform in size and tightly packed according to the approved and recognized methods. The fruits in the top layer shall not be noticeably superior in quality or size to those in remainder of the package.

The size of plums or prunes packed in 4-basket crates shall be indicated as follows: 4 x 4, 4-3 x 5, 4 x 5, 5-2 x 5, 5 x 5, etc., in accordance with the arrangement in the top layer of the basket. These packs shall not be more than 3 layers deep.

The arrangement of the bottom layer shall be one row less one way, and may be one row less each way, than the arrangement of the top layer. The arrangement of the middle layer may be the same as the top layer, or may be one row less one way than the arrangement of the top layer. Straight, offset and diagonal packs in the layers are permitted. For example a pack with 5 x 5 in the top layer may have 5 x 5 in the middle layer and shall have 4 x 5 or 4-3 x 5, or 4 x 4 in the bottom layer.

In layer packed California peach or lug boxes the count in the entire container shall be marked on the package.

In order to allow for variations incident to proper packing, not more than 10 per cent., by count, of the containers in any lot may not meet the requirements for the Standard Pack.

Definitions of Terms

As used in these standards:

1. "Well formed" means that the plums or prunes have the shape characteristic of the variety.

2. "Mature" means that the plums or prunes have reached the stage of maturity which will insure a proper completion of the ripening process.

3. "Damage" means any injury or defect which materially affects the appearance or keeping quality of the fruit. Any one of the following defects, or any

combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as damage:

(a) Hail marks, when the injury is more than superficial, or superficial hail marks which exceed $\frac{3}{8}$ inch in the aggregate, or when the skin has been broken.

(b) Growth cracks, when deep or not well healed, or well healed and shallow growth cracks when more than one in number or when more than $\frac{1}{4}$ inch in length.

(c) Sunburn, when the normal color of the plum or prune is materially changed, or the skin is blistered or cracked.

(d) Split pits which injure the shipping quality or which materially injure the appearance of the individual fruits.

(e) Russetting, when aggregating more than 10 per cent. of the fruit surface.

(f) Thorn and limb scratches, when not well healed, or when aggregating more than $\frac{1}{2}$ inch in length.

4. "Serious damage" means any injury or defect which seriously detracts from the appearance or keeping quality of the fruit. Plums or prunes with pulled stems where the skin has been torn beyond the stem basin, and all other unhealed cuts and skin breaks shall be considered as serious damage.

5. "Well colored" as applied to Italian type prunes means that 95 per cent. of the surface of the prune is covered with purple color except that portion which is permitted to be affected by russetting.

6. "Fairly well colored" as applied to Italian type prunes means that not less than three-fourths of the surface of the prune shows purple color.

7. "Size" means the smallest diameter measured through the center of the plum or prune at right angles to the straight line running from the stems to blossom end.

8. "Fairly uniform in size" means that the fruits in each packed container shall not show a variation of more than one-fourth of an inch in diameter.

STANDARD GRADES FOR POTATOES

(Effective June 1, 1942)

Numbers and letters in parentheses following grade terms indicate where such terms are defined under Definition of Terms.

All percentages shall be calculated on the basis of weight.

The tolerances for the standards are on a container basis. However, if the averages for the entire lot, based on sample inspection, are within the tolerances specified in the standards, the contents of individual packages in the lot may vary from the specified tolerances subject to the following limitations:

When the tolerance specified is 10 per cent. or more, not over one-tenth of the individual packages in the lot may contain more than one and one-half times the tolerance except that at least one defective specimen shall be permitted in a package.

When the tolerance specified is less than 10 per cent., not over one-tenth of the individual packages in any lot may contain more than double the tolerance specified, but no package may contain more than four times the tolerance for soft rot or wet breakdown except that at least one defective specimen shall be permitted in a package.

Grades

U. S. Fancy shall consist of potatoes of one variety or similar varietal characteristics which are firm, mature (1), bright (2), well shaped (3), free from freezing injury, blackheart, blight, shrivelling, sprouting, wireworm injury, soft rot or wet breakdown (4), hollow heart, and internal discoloration (5), and free from injury (6) caused by dirt or other foreign matter, sunburn, second growth, growth cracks, air cracks, cuts, scab, dry rot, rhizoctonia, other disease, other insects or mechanical or other means (6).

The diameter (7) of each potato shall be not less than 2 inches.

For long varieties such as Burbank, Russet Burbank, Early Ohio, Pride of Wisconsin, or other similar varieties, not less than 40 per cent. of the potatoes in any lot shall be 6 ounces or more in weight.

For round or intermediate shaped varieties such as Irish Cobbler, Bliss Triumph, Green Mountain, or other similar varieties, not less than 60 per cent. of the potatoes in any lot shall be $2\frac{1}{4}$ inches or larger in diameter.

The size of the potatoes may be stated in terms of minimum diameter or minimum weight, or of range in diameter or weight, or of a certain percentage over a certain size, following the grade name, but in no case shall the potatoes be below sizes specified for this grade. (See Tolerance for Size.)

Tolerance for defects. In order to allow for variations other than size incident to proper grading and

handling, not more than 6 per cent of the potatoes in any container may be below the requirements of the grade, but not to exceed one-sixth of this amount, or 1 per cent., shall be allowed for potatoes affected by soft rot or wet breakdown.

U. S. Extra No. 1 shall consist of potatoes of one variety or similar varietal characteristics which are fairly well shaped (8), fairly clean (9), free from freezing injury, blackheart, blight, and soft rot or wet breakdown (4) and from damage (10) caused by sunburn, second growth (10a), growth cracks (10a), air cracks (10b), hollow heart, internal discoloration (5 and 10), cuts, shriveling (10c), sprouting (10d), scab (10e and f), dry rot, rhizoctonia (10g), other disease (10), wireworms (10h), other insects or mechanical or other means (10).

Unless otherwise specified, size of potatoes (see Size Classification and Tolerance for Size) shall be as follows:

The diameter (7) of each potato shall be not less than $1\frac{1}{8}$ inches.

For long varieties such as Burbank, Russet Burbank, Early Ohio, Pride of Wisconsin, or other similar varieties, not less than 60 per cent. of the potatoes in the lot shall be 6 ounces or larger, of which not less than one-half, or 30 per cent., shall be 10 ounces or more in weight.

For round or intermediate shaped varieties such as Irish Cobbler, Bliss Triumph, Green Mountain, or other similar varieties, not less than 60 per cent. of the potatoes in the lot shall be $2\frac{1}{4}$ inches or larger, of which not less than one-half, or 30 per cent., shall be $2\frac{3}{4}$ inches or larger in diameter.

Tolerance for defects. In order to allow for variations other than size incident to proper grading and handling, not more than 6 per cent. of the potatoes in any container may be below the requirements of the grade, but not to exceed one-sixth of this amount, or 1 per cent., shall be allowed for potatoes affected by soft rot or wet breakdown. In addition, not more than 5 per cent. may be damaged by hollow heart, and internal discoloration.

U. S. No. 1 shall consist of potatoes of one variety or similar varietal characteristics which are fairly well shaped (8), free from freezing injury, blackheart, blight, and soft rot or wet breakdown (4), and from damage (10) caused by dirt (10i) or other foreign matter (10l), sunburn, second growth (10a), growth cracks (10a), air cracks (10b), hollow heart, internal

discoloration (5 and 10), cuts, shriveling (10c), sprouting (10d), scab (10e and f), dry rot, rhizoctonia (10g), other disease (10), wireworms (10h), other insects or mechanical or other means (10).

Unless otherwise specified the diameter (7) of each potato shall be not less than $1\frac{1}{8}$ inches. (See Size Classification and Tolerance for Size.)

Tolerance for defects. In order to allow for variations other than size incident to proper grading and handling, not more than 6 per cent. of the potatoes in any container may be below the requirements of the grade but not to exceed one-sixth of this amount, or 1 per cent., shall be allowed for potatoes affected by soft rot or wet breakdown. In addition, not more than 5 per cent. may be damaged by hollow heart and internal discoloration.

U. S. Commercial shall consist of potatoes which meet the requirements of U. S. No. 1 grade except that they shall be free from serious damage by dirt (11a) and except for the increased tolerance for defects specified below.

Unless otherwise specified, the diameter (7) of each potato shall be not less than $1\frac{1}{8}$ inches. (See Size Classification and Tolerance for Size.)

Tolerance for defects. In order to allow for variations other than size and sprouting incident to proper grading and handling, not more than a total of 20 per cent. of the potatoes in any container may be below the requirements of this grade, but not more than 5 per cent. may be seriously damaged by hollow heart and internal discoloration and not over 6 per cent. may be below the remaining requirements of U. S. No. 2 grade, provided that not more than one-sixth of this amount, or 1 per cent., shall be allowed for potatoes affected by soft rot or wet breakdown. In addition, not more than 10 per cent. of the potatoes may have sprouts over $\frac{3}{4}$ inch long, but which are not seriously damaged by shriveling, provided, that if all of the 20 per cent. tolerance is not used for other defects, the unused part of the tolerance may also be used for potatoes having sprouts over $\frac{3}{4}$ inch long but which are not seriously damaged by shriveling.

U. S. No. 2 shall consist of potatoes one variety or similar varietal characteristics which are free from freezing injury, blackheart, and soft rot or wet breakdown (4) and from serious damage (11) caused by dirt (11a) or other foreign matter, sunburn, second growth, growth cracks, air cracks, hollow heart, internal discoloration (5 and 11), cuts (11b), scab (11d)

and e), blight, dry rot, other disease, wireworm (11f), other insects, or mechanical or other means (11).

Unless otherwise specified the diameter (7) of each potato shall be not less than 1½ inches. (See Size Classification and Tolerance for Size.)

Tolerance for defects. In order to allow for variations other than size incident to proper grading and handling, not more than 6 per cent. of the potatoes in any container may be below the requirements of the grade, but not to exceed one-sixth of this amount, or 1 per cent., shall be allowed for potatoes affected by soft rot or wet breakdown. In addition, not more than 5 per cent. may be seriously damaged by hollow heart and internal discoloration.

Unclassified shall consist of potatoes which have not been classified in accordance with any of the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards but is provided as a designation to show that no definite grade has been applied to the lot.

Size Classification for All Grades of Potatoes Except U. S. Fancy

When the potatoes are designated as "U. S. No. 1", "U. S. Commercial", or "U. S. No. 2" without specifying a size classification, it is understood that the potatoes meet the minimum size specified in the grade but that no definite percentage of the potatoes is required to be larger than this minimum size.

When potatoes meet the requirements of either size A or size B as described below, the size classification may be specified in connection with any of the U. S. grades except Fancy, as: "U. S. No. 1, Size A"; "U. S. Extra No. 1, Size A"; "U. S. Commercial, Size B"; "U. S. No. 1, Size B"; "U. S. No. 2, Size A"; or "U. S. No. 2, Size B"; in accordance with the facts. When size A or size B is used in connection with the grade, it is not permissible to specify any smaller sizes than those specified under these designations.

Size A. For long varieties such as Burbank, Russet Burbank, Early Ohio, Pride of Wisconsin, or other similar varieties, the diameter of each potato shall be not less than 1½ inches and not less than 40 per cent. of the potatoes in the lot shall be 6 ounces or more in weight.

For round or intermediate shaped varieties such as Irish Cobbler, Bliss Triumph, Green Mountain, or

other similar varieties, the diameter of each potato shall be not less than 1½ inches and not less than 60 per cent. of the potatoes in the lot shall be 2¼ inches or larger in diameter.

Size B. For all varieties the size shall be from 1½ inches to not more than two inches in diameter.

Other Sizes. When either of the above size designations is not used in connection with U. S. Extra No. 1, U. S. No. 1, U. S. Commercial, or U. S. No. 2 grades, it is permissible to specify any other minimum size such as "1½ inches minimum", "2 inches minimum"; or both a minimum and a maximum size as "1½ inches to 3 inches", "6 to 10 ounces"; or to specify a certain percentage over a certain size as "25 per cent. or more 2¼ inches and larger", "50 per cent. or more 6 ounces and larger."

Tolerance for size. In order to allow for variations incident to proper sizing, not more than 3 per cent. of the potatoes in any container may be below the specified minimum size except that a tolerance of 5 per cent. shall be allowed for potatoes packed to meet a minimum size of 2¼ inches or more in diameter, or 6 ounces or larger in weight. In addition, not more than 15 per cent. may be above any specified maximum size.

When a percentage of the potatoes is specified to be of a certain size and larger, no part of any tolerance shall be used to reduce such a percentage for the lot as a whole, but individual containers may have not more than 15 per cent. less than the percentage required or specified provided that the entire lot averages within the percentage specified. For example, a lot specified as 25 per cent 2½ inches and larger may have containers with not less than 10 per cent. 2½ inches and larger provided the lot as a whole averages 25 per cent. 2½ inches and larger.

Definitions of Terms

As used in these standards:

1. "Mature" means that the outer skin (epidermis) does not loosen or "feather" readily during the ordinary methods of handling.

2. "Bright" means practically free from dirt or other foreign matter and that the outer skin (epidermis) has the attractive color normal for the variety.

3. "Well shaped" means the normal shape for the variety and that the potato is not pointed, dumbbell shaped, excessively elongated, or otherwise ill-formed.

4. "Soft rot or wet breakdown" means any soft, mushy, or leaky condition of the tissue such as slimy soft rot, leak, or wet breakdown following freezing injury or sunscald.

5. "Internal discoloration" means discoloration such as is caused by net necrosis or any other type of necrosis, stem-end browning, internal brown spot, or other similar types of discoloration not visible externally, except blackheart.

6. "Injury" means any defect which more than slightly affects the shipping quality or the appearance of the individual potato or the general appearance of the potatoes in the container, or which cannot be removed without a loss of more than 2 per cent. of the total weight of the potato including peel covering defective area.

7. "Diameter" means the greatest dimensions at right angles to the longitudinal axis. The long axis shall be used without regard to the position of the stem (Rhizome).

8. "Fairly well shaped" means that the appearance of the individual potato or the general appearance of the potatoes in the container is not materially injured by pointed, dumbbell-shaped or otherwise ill-formed potatoes.

9. "Fairly clean" means that from the viewpoint of general appearance the potatoes in the container are reasonably free from dirt or other foreign matter and that individual potatoes are not materially caked with dirt or materially stained.

10. "Damage" means any injury or defect which materially injures the shipping quality or the appearance of the individual potato or the general appearance of the potatoes in the container, or which cannot be removed without a loss of more than 5 per cent. of the total weight of the potato including peel covering defective area. Loss of outer skin (epidermis) shall not be considered as damage unless the skinned surface is materially affected by very dark discoloration. Any one of the following defects or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect shall be considered as damage.

(a) Second growth or growth cracks which have developed to such an extent as to materially injure the appearance of the individual potato or the general appearance of the potatoes in the container.

(b) Air cracks which are deep, or shallow air cracks which materially injure the appearance of the individual potato or the general appearance of the potatoes in the container.

(c) Shriveling when the potato is more than moderately shriveled, spongy or flabby.

(d) Sprouting when more than 10 per cent. of the potatoes have sprouts over three-fourths of an inch long.

(e) Surface scab which covers an area of more than 5 per cent. of the surface of the potato in the aggregate.

(f) Pitted scab which affects the appearance of the potato to a greater extent than the amount of surface scab permitted or causes a loss of more than 5 per cent. of the total weight of the potato, including peel covering defective area.

(g) Rhizoctonia when the general appearance of the potatoes in the container is materially injured or when individual potatoes are badly infected.

(h) Wireworm, grass root or similar injury when any hole, on potatoes ranging in size from 6 to 8 ounces, is longer than $\frac{3}{4}$ inch or when the aggregate length of all holes is more than $1\frac{1}{4}$ inches. Smaller potatoes shall have lesser amounts, provided larger potatoes may have greater amounts, provided that the removal of the injury by proper trimming does not cause the appearance of such potatoes to be injured to a greater extent than that caused by the proper trimming of such injury permitted on a 6 to 8 ounce potato.

(i) Dirt when the general appearance of the potatoes in the container is more than slightly dirty or stained, or when individual potatoes are badly caked with dirt or badly stained; or other foreign matter which materially affects the appearance of the potatoes.

11. "Serious damage" means any injury or defect which seriously injures the appearance of the individual potato or the general appearance of the potatoes in the container, or which cannot be removed without a loss of more than 10 per cent. of the total weight of the potato, including peel covering defective area. Any one of the following defects or any combination of defects the seriousness of which exceeds the maximum allowed for any one defect shall be considered as serious damage:

(a) Dirt when the general appearance of the potatoes in the container is seriously affected by tubers

badly caked with dirt; or other foreign matter which seriously affects the appearance of the potatoes.

(b) Fairly smooth cuts such as are made by the digger or by a knife to remove injury when both ends are clipped, or when more than an estimated one-fourth of the potato is cut away, or, in the case of long varieties, when the remaining portion of the clipped potato weighs less than 6 ounces.

Irregular types of cuts which seriously affect the appearance of the individual potato, or which cannot be removed without a loss of more than 10 per cent. of the total weight of the potato including peel covering defective area.

(c) Shriveling when the potato is excessively shriveled, spongy, or flabby.

(d) Surface scab which covers an area of more than 50 per cent. of the surface of the potato in the aggregate.

(e) Pitted scab which affects the appearance of the potato to a greater extent than the amount of surface scab permitted or causes a loss of more than 10 per cent. of the total weight of the potato including peel covering defective area.

(f) Wireworm, grass root or similar injury when any hole, on potatoes ranging in size from 6 to 8 ounces, is longer than $1\frac{1}{4}$ inches or when the aggregate length of all holes is more than 2 inches. Smaller potatoes shall have lesser amounts and larger potatoes may have greater amounts, provided that the removal of the injury by proper trimming, does not cause the appearance of such potatoes to be injured to a greater extent than that caused by the proper trimming of such injury permitted on a 6 to 8 ounce potato.

STANDARD GRADES FOR RASPBERRIES

(Effective May 29, 1931)

Grades

U. S. No. 1 shall consist of raspberries of one variety which are well colored, well developed and not soft, overripe or broken; which are free from cores, sunscald, mold and decay, and from damage caused by dirt or other foreign matter, shriveling, moisture, disease, insects, mechanical or other means.

In order to allow for variations incident to proper grading and handling not more than 10 per cent., by volume, of the raspberries in any container may be

below the requirements of this grade, but not to exceed one-half of this tolerance or 5 per cent., shall be allowed for defects causing serious damage and not more than one-fifth of this amount or 1 per cent. may be affected by mold or decay.

U. S. No. 2 shall consist of raspberries of one variety which are not graded in conformity with the foregoing grade and which do not contain more than 10 per cent., by volume, of raspberries that have been seriously damaged from any cause, but not more than one-fifth of this amount, or 2 per cent., may be affected by mold or decay.

Unclassified shall consist of raspberries which are not graded in conformity with either of the foregoing grades.

Definitions of Terms

As used in these grades:

1. "Well colored" means that the whole surface of the berry shows a color characteristic of a mature berry.

2. "Well developed" means that the berries shall not be misshapen owing to anthraenose injury, frost injury, lack of pollination, insect injury, or other causes.

3. "Overripe" means dead ripe or soft, necessitating immediate consumption.

4. "Damage" means any injury or defect which materially affects the appearance, edible or shipping quality.

5. "Serious damage" means berries which are badly deformed, crushed, leaky, moldy, decayed or otherwise seriously injured. Berries which have poor color characteristic of immature berries or berries from which the core has not been removed shall be considered as seriously damaged.

STANDARDS FOR STRAWBERRIES

(Revised March 23, 1942, as amended)

The tolerances for the standards are on a container (cup) basis. However, individual containers in any lot may vary from the specified tolerances as stated below, provided the averages for the entire lot, based on sample inspection, are within the tolerances specified.

For a tolerance of 10 per cent. or more, individual containers in any lot may have not more than one and one-half times the tolerance specified, except that

when the container has 15 specimens or less, individual containers may have not more than double the tolerance specified.

For a tolerance of less than 10 per cent., individual containers in any lot may have not more than double the tolerance specified, provided at least one specimen which does not meet the requirements shall be allowed in any one container.

Grades

U. S. No. 1 shall consist of strawberries of one variety, or similar varietal characteristics, with the cap (calyx) attached, which are firm, not overripe or undeveloped, and which are free from mold or decay and from damage caused by dirt, moisture, foreign matter, disease, insects or mechanical or other means. Each strawberry shall have not less than three-fourths of its surface showing a pink or red color. Unless otherwise specified, the minimum size shall be not less than three-quarters of an inch in diameter.

In order to allow for variations other than size, incident to proper grading and handling, not more than a total of 10 per cent., by volume, of the strawberries in any container may be below the requirements of this grade, but not more than 5 per cent. shall be allowed for defects causing serious damage, and not more than two-fifths of this amount, or 2 per cent., shall be allowed for strawberries affected by decay.

In addition, not more than 5 per cent., by volume, of the strawberries in any container may be below the specified minimum size.

U. S. No. 2 shall consist of strawberries which are free from decay and from serious damage caused by dirt, disease, insects, mechanical or other means. Each strawberry shall have not less than one-half of its surface showing a pink or red color. Unless otherwise specified, the minimum size shall be not less than five-eighths of an inch in diameter.

In order to allow for variations other than size, incident to proper grading and handling, not more than a total of 10 per cent., by volume, of the strawberries in any container shall be allowed for defects causing serious damage, but not more than 3 per cent. shall be allowed for strawberries affected by decay.

In addition, not more than 5 per cent., by volume, of the strawberries in any container may be below the specified minimum size.

U. S. Combination. Any lot of strawberries may be designated "U. S. Combination" when not less than 80

per cent., by volume, of the strawberries in each container meet the requirements of U. S. No. 1 grade and the remainder meet the requirements of U. S. No. 2 grade, except for size. Unless otherwise specified, the minimum size shall be not less than $\frac{3}{4}$ of an inch in diameter.

In order to allow for variations other than size, incident to proper grading and handling, not more than a total of 10 per cent., by volume, of the strawberries in any container shall be allowed for defects causing serious damage, provided that not more than one-fifth of this amount, or 2 per cent., shall be allowed for strawberries affected by decay. No part of any tolerance shall be allowed to reduce for the lot as a whole, the percentage of U. S. No. 1 strawberries required in the combination, but individual containers may have not less than 65 per cent. of U. S. No. 1 strawberries, provided the entire lot averages within the percentage required.

In addition, not more than 5 per cent., by volume, of the strawberries in any container may be below the specified minimum size.

Unclassified shall consist of strawberries which have not been classified in accordance with the foregoing grades. The term "unclassified" is not a grade within the meaning of these standards, but is provided as a designation to show that no definite grade has been applied to the lot.

Definitions of Terms

As used in these standards:

1. "Overripe" means dead ripe, becoming soft, a condition unfit for shipment and necessitating immediate consumption.
2. "Undeveloped" means that the berry has not attained a normal shape and development due to frost injury, lack of pollination, insect injury, or other causes. "Button" berries are the most common type of this condition.
3. "Damage" means any injury or defect which materially affects the appearance or the edible or shipping quality.
4. "Serious damage" means any injury or defect which seriously affects the appearance or the edible or shipping quality. Soft, badly deformed, badly bruised, decayed or leaky strawberries, or strawberries which are caked with dirt or which have less than one-half of the surface showing pink or red color shall be considered as seriously damaged.

5. "Diameter" means the greatest dimension measured at right angles to a straight line running from the stem to the apex.

STANDARD GRADES FOR GROWERS' STOCK STRAWBERRIES FOR MANUFACTURE
(Effective June 1, 1935)

Grades

U. S. No. 1 shall consist of strawberries of one variety which are well colored, free from mold and decay and from soft, badly crushed or split, dried or undeveloped berries and from damage caused by dirt or other foreign matter, hail, sunscald, birds, disease, insects, mechanical or other means. **Unless otherwise specified**, the minimum size shall be not less than $\frac{5}{8}$ inch in diameter and the caps shall be entirely removed.

In order to allow for variations incident to proper handling, not more than 5 per cent., by weight, of the strawberries in any lot may be below the requirements of this grade.

U. S. No. 2 shall consist of strawberries which meet all the requirements of U. S. No. 1 grade except that a tolerance of 10 per cent., by weight, of the strawberries in any lot shall be permitted for grade defects.

U. S. No. 3 shall consist of strawberries which meet all the requirements of U. S. No. 1 grade except that a tolerance of 15 per cent., by weight, of the strawberries in any lot shall be permitted for grade defects.

U. S. No. 4 shall consist of strawberries which meet all the requirements of U. S. No. 1 grade except that a tolerance of 20 per cent., by weight, of the strawberries in any lot shall be permitted for grade defects.

Unclassified shall consist of strawberries which do not meet the requirements of any of the foregoing grades.

Definitions of Terms

As used in these standards:

1. "Well covered" means that at least four-fifths of the surface of the berry is covered with red or pink color.

2. "Soft" means that more than one-third of the volume of the whole berry is mushy or will be removed in the ordinary process of washing.

3. "Dried" means appreciably lacking in juice. Dried berries are excessively seedy and often shriveled.

4. "Undeveloped" means lack of development due to frost or insect injury, lack of pollination or other means which causes the berry to be badly misshapen.

5. "Damage" means any injury or defect which materially affects the appearance or edible quality of the berry for manufacturing purposes.

6. "Damage by dirt" means that the berry shows dirt which will not wash off in the ordinary process of washing.

7. "Diameter" means the greatest dimension measured at right angles to a straight line running from the stem to the apex.

STANDARD GRADES FOR WASHED AND SORTED STRAWBERRIES FOR FREEZING

(Effective June 1, 1935)

These standards are intended for use only for strawberries which have been washed and sorted just prior to being placed in containers for freezing. Samples for the purpose of determining quality shall be taken immediately after washing and grading and before any other factory operations have taken place.

Offered as companion grades to the U. S. Standards for Growers' Stock Strawberries for Manufacture, the U. S. Standards for Washed and Sorted Strawberries for Freezing may be used at a grading station either alone or in conjunction with the other grades.

There are several quality factors pertaining to frozen strawberries which may be most satisfactorily determined through inspection of samples of the fruit immediately after washing and grading. For this reason, the standards may be used to advantage as a basis for buying and selling of the finished product even though they are applied to the fruit before it is frozen, but obviously the standards do not apply to the finished product.

Grades

U. S. No. 1 shall consist of strawberries of one variety which are properly washed, well colored, free from mold and decay, and from soft, badly crushed or split, dried or undeveloped berries and from damage caused by foreign matter, hail, sunscald, birds, disease, insects, mechanical or other means. Caps shall be entirely removed. **Unless otherwise specified**, the

minimum size shall be not less than $\frac{5}{8}$ inch in diameter.

In order to allow for variations incident to proper grading and handling, not more than 5 per cent., by weight, of the strawberries in any lot may be below the requirements of this grade, provided that less than 1 per cent. shall be affected by mold or decay.

Unclassified shall consist of strawberries which do not meet the requirements of the foregoing grade.

Definitions of Terms

As used in these standards:

1. "Properly washed" means that the berries have been washed with fresh, clean water so as to remove all soil, dirt or other foreign matter which may be detected by the taste or naked eye.

2. "Well colored" means that at least four-fifths of the surface of the berry is covered with red or pink color.

3. "Soft" means that more than one-third of the volume of the whole berry is mushy or has been removed by washing. Berries showing moist surface bruises from the recent handling in washing and sorting shall not be considered as soft.

4. "Dried" means appreciably lacking in juice. Dried berries are excessively seedy and often shriveled.

5. "Undeveloped" means lack of development due to frost or insect injury, lack of pollination or other means which causes the berry to be badly misshapen.

6. "Damage" means any injury or defect which materially affects the appearance or edible quality of the berry for manufacturing purposes.

7. "Diameter" means the greatest dimension measured at right angles to a straight line running from the stem to the apex.

STANDARD GRADES FOR TOMATOES

(Revised September 3, 1934)

U. S. No. 1 shall consist of tomatoes of similar varietal characteristics (1) which are mature (2), but not overripe or soft; which are fairly well formed (3), fairly smooth (4), free from decay, freezing injury, and from damage (5), caused by dirt, bruises, cuts (5a), sunscald, sunburn, puffiness (5b), catfaces (5c), growth cracks (5d), sears (5e), insects, hail or mechanical or other means (5), and free from visible diseases at shipping point.

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of the tomatoes in any container may be below the requirements of this grade but not more than one-half of this tolerance, or 5 per cent., shall be allowed for defects causing serious damage (7), and not more than one-fifth of this amount, or one per cent., may be allowed for soft ripe tomatoes or tomatoes affected by decay at shipping point or for soft ripe tomatoes or tomatoes affected by decay in shipments from Mexico when inspected at points of entry into the United States. In addition a total tolerance of not more than 5 per cent. shall be allowed for soft ripe tomatoes and not more than a total of 5 per cent. shall be allowed for tomatoes affected by decay en route or at destination.

U. S. No. 2 shall consist of tomatoes of similar varietal characteristics (1) which are mature (2), but not overripe or soft; not badly misshapen (6), free from decay, unhealed cuts, freezing injury, and from serious damage (7) caused by bruises, sunscald, sunburn, puffiness (7d), catfaces, growth cracks, sears, diseases, insects (7e), hail or mechanical or other means (7).

In order to allow for variations incident to proper grading and handling, not more than 10 per cent., by count, of the tomatoes in any container may be below the requirements of this grade, but not more than one-tenth of this tolerance, or one per cent. may be allowed for soft ripe tomatoes or tomatoes affected by decay at shipping point or for soft ripe tomatoes or tomatoes affected by decay in shipments from Mexico when inspected at points of entry into the United States. In addition a total tolerance of not more than 5 per cent. shall be allowed for soft ripe tomatoes and not more than a total of 5 per cent. shall be allowed for tomatoes affected by decay en route or at destination.

Unclassified shall consist of tomatoes which are not graded in conformity with either of the foregoing grades.

Marking for Size

The minimum size, total count, or description of the arrangement of the tomatoes in the top layer in any package should be plainly stenciled or otherwise marked on the package.

"Minimum size" means the greatest diameter of the smallest fruit measured at right angles to a line running from the stem to the blossom end. It should

be stated in terms of whole and quarter inches as 2" minimum, 2½" minimum, 2½" minimum, and so on in accordance with the facts.

In order to allow for variations incident to proper sizing, not more than 5 per cent., by count, of the tomatoes in any container may vary from the minimum diameter or the total count specified. (The tolerance for packs is given under "U. S. Standard Packs.")

U. S. Standard Packs

"U. S. Standard Packs" apply particularly to packing in lugs and should be designated according to the number of rows in the top layer in a lug, as 5x5, 5x6, 6x6, and so on in accordance with the facts. The tomatoes in all layers shall show a uniform type of arrangement, e. g., square, offset, or diagonal. The following terms shall be used to describe U. S. Standard Packs in lugs:

"U. S. Straight Pack." When specified as "U. S. Straight Pack" the tomatoes shall be fairly uniform in size and fairly tightly packed, and all layers in any lug shall have the same number of tomatoes provided that when a diagonal arrangement of tomatoes is used, a variation of not more than one tomato shall be permitted in different layers. For example, in a 5x5 pack the tomatoes shall be packed 5 rows wide and 5 rows long in each layer, or in an 8x8 pack the tomatoes shall be packed 8 rows wide and 8 rows long in each layer, or in a 4-5x9 diagonal pack the tomatoes shall be packed alternately 4 and 5 to the row the short way of lug with 9 such rows in the layer and with either 40 or 41 tomatoes in each layer. **Unless otherwise specified**, the net weight of the tomatoes in the lug shall be not less than 30 pounds. Not more than one tomato shall be placed in a wrapper.

"U. S. Extra Row Pack." When specified as "U. S. Extra Row Pack" the tomatoes shall be fairly uniform in size and fairly tightly packed, and the lower layers shall not contain more than one additional row one way of the lug, for example, in a 5x5 pack, the tomatoes in the lower layers may be packed 5x6, but not 6x6 or 5x7, or in a 7x7 pack, the tomatoes in the lower layers may be packed 7x8 but not 8x8. **Unless otherwise specified**, the net weight of the tomatoes in the lug shall be not less than 30 pounds. Not more than one tomato shall be placed in a wrapper.

"U. S. Bridge Pack." When specified as "U. S. Bridge Pack" the tomatoes shall be fairly uniform in size and fairly tightly packed, and a part of one

additional layer of tomatoes shall be packed in the lug and the remaining tomatoes in the lower layers shall not contain more than one additional row one way of the lug than is contained in the top layer. **Unless otherwise specified**, the net weight of the tomatoes in the lug shall be not less than 30 pounds. Not more than one tomato shall be placed in a wrapper.

"U. S. Double Wrap Pack." When specified as "U. S. Double Wrap Pack" the tomatoes shall be fairly uniform in size and fairly tightly packed, and the tomatoes in the top layer shall be packed with not more than one tomato in a wrapper and the lower layer or layers shall be packed with not more than two tomatoes in a wrapper. **Unless otherwise specified**, the net weight of the tomatoes in the lug shall be not less than 30 pounds.

In order to allow for variations incident to proper packing, not more than 10 per cent., by count, of the containers in any lot may not meet the requirements for any described pack.

"Irregular Pack." Lugs of tomatoes which are not packed in accordance with any of the foregoing methods of packing may be designated as "Irregular Pack".

Definitions of Terms

As used in these grades:

1. "Similar varietal characteristics" means that the tomatoes are alike as to firmness of flesh and shade of color, i. e., that soft-fleshed early maturing varieties are not mixed with firm-fleshed mid-season or late varieties, or bright red varieties mixed with varieties having a purplish tinge.

2. "Mature" means that the contents of the seed cavities have begun to develop a jelly or glue-like consistency and the seeds are well developed.

3. "Fairly well formed" means that the tomato is not decidedly kidney shaped, lopsided, elongated, angular, or otherwise deformed.

4. "Fairly smooth" means that the tomato is not conspicuously ridged or rough.

5. "Damage" means any injury which materially affects the appearance or the edible or shipping quality. The following shall be considered as damage:

(a) Cuts which are not shallow, not well healed or more than $\frac{1}{2}$ inch in length.

(b) Puffy tomatoes. These tomatoes are usually angular and flat sided. They are damaged if open

space in one or more locules materially affects the appearance when the tomato is cut through the center at right angles to a line running from the stem to the blossom end.

(c) Catfaces. These are irregular, dark, leathery scars at the blossom end of fruit. Such scars damage the tomato when they are fairly smooth and greater in area than a circle $\frac{3}{4}$ inch in diameter, or when rough or deep, or when channels extend deeply into the fruit.

(d) Growth cracks. These are ruptures or cracks radiating from the stem scar, or cracks concentric to the stem scar. They damage the tomato when not well healed, or when more than $\frac{1}{2}$ inch in length; except, that very narrow well healed cracks concentric to the stem scar shall not be considered as damage unless they are so numerous as to damage the appearance of the fruit.

(e) Scars (except catfaces) when aggregating more than $\frac{3}{8}$ inch in diameter.

6. "Badly misshapen" means that the tomato is so badly deformed that its appearance is seriously affected.

7. "Serious damage" means any injury which seriously affects the appearance, edible or shipping quality. The following shall be considered as serious damage:

- (a) Soft ripe tomatoes or tomatoes affected by decay.
- (b) Fresh holes, or cuts through the tomato wall.
- (c) Tomatoes showing any effects of freezing.
- (d) Puffiness which causes the tomato to be distinctly light in weight.
- (e) Fruit actually infested with worms.

8. "Fairly uniform in size" means that not more than 10 per cent., by count, of the tomatoes in any container may vary more than one-half inch in diameter. "Diameter" means the greatest dimension taken at right angles to a line running from the stem to the blossom end.

STANDARD GRADES FOR CANNING TOMATOES

(Revised December 31, 1938)

Grades

U. S. No. 1 shall consist of tomatoes which are firm, ripe, well colored, well formed; free from molds and decay and from damage caused by growth cracks,

worm holes, catfaces, sunscald, freezing, injury, or mechanical or other means. (See minimum size.)

U. S. No. 2 shall consist of tomatoes which do not meet the requirements of the foregoing grade but which are ripe and fairly well colored and which are free from serious damage from any cause. (See minimum size.)

Culls are tomatoes which do not meet the requirements of either of the foregoing grades.

Minimum Size

The minimum size may be fixed by agreement between buyer and seller. Tomatoes below this specified minimum size shall be classed as Culls.

Definitions of Terms

As used in these standards:

1. "Firm" means that the tomato is not soft, puffy, shriveled or water soaked.

2. "Well colored" means that at least 90 per cent of the flesh of the tomato has **good red** color, provided that a tomato having flesh of a lighter shade of red shall be considered as "well colored" if enough additional area of the flesh has a shade of red color so that the tomato has a sufficient amount of red to be equivalent in color to that of a tomato which has 90 per cent. **good red** color.

3. "Fairly well colored" means that at least two-thirds of the flesh of the tomato has **good red** color, provided that a tomato having flesh of a lighter shade of red shall be considered as "fairly well colored" if enough additional area of the flesh has a shade of red color so that the tomato has a sufficient amount of red to be equivalent in color to that of a tomato which has two-thirds **good red** color.

4. "Well formed" means that the tomato shall not be extremely flat or otherwise badly misshapen.

5. "Damage" means any injury which cannot be removed in the ordinary process of trimming and peeling without a loss of more than 10 per cent. (by weight) of the tomato in excess of that which would occur if the tomato were perfect.

6. "Serious damage" means any injury which cannot be removed in the ordinary process of trimming and peeling without a loss of more than 20 per cent. (by weight) of the tomato in excess of that which would occur if the tomato were perfect.

**STANDARD GRADES FOR TOMATOES FOR
MANUFACTURE OF STRAINED PRODUCTS**

(Revised March 1, 1933)

U. S. No. 1 shall consist of tomatoes which are fairly firm, ripe, well colored, and free from stems and from damage caused by badly discolored cracks, shriveling, molds, decay, sunburn, sunscald, freezing or other means.

U. S. No. 2 shall consist of tomatoes which do not meet the requirements of the foregoing grade but which are ripe and fairly well colored and which are free from serious damage from any cause.

Culls are tomatoes which do not meet the requirements of either of the foregoing grades.

Definitions of Terms

As used in these grades:

1. "Fairly firm" means that the tomato is not water soaked.

2. "Well colored" means that at least 90 per cent. of the flesh of the tomato has **good red** color, provided that a tomato having flesh of a lighter shade of red shall be considered as "well colored" if enough additional area of the flesh has a shade of red color so that the tomato has a sufficient amount of red to be equivalent in color to that of a tomato which has 90 per cent. **good red** color.

3. "Fairly well colored" means that at least two-thirds of the flesh of the tomato has **good red** color, provided that a tomato having flesh of a lighter shade of red shall be considered as "fairly well colored" if enough additional area of the flesh has a shade of red color so that the tomato has a sufficient amount of red to be equivalent in color to that of a tomato which has two-thirds **good red** color.

4. "Damage" means any injury which appreciably affects the quality of the tomato for pulping. Any one of the following defects or any combination of defects which exceeds the maximum allowed for any one defect shall be considered as damage:

(a) Molds or decay, except that molds or very slight decay which can be removed in the ordinary process of washing without hand trimming shall not be considered as damage.

(b) Sunburn or sunscald which cannot be removed in the ordinary process of trimming without a loss

of more than 10 per cent., by weight, of the tomato in excess of that which would occur if the tomato were perfect.

(c) Tomatoes which show an appreciable amount of shriveling.

5. "Serious damage" means any injury which severely affects the quality of the tomato for pulping. Any one of the following defects or any combination of defects which exceeds the maximum allowed for any one defect shall be considered as serious damage:

(a) Decay which has caused the tomato to become sour, or decay or disease, such as Anthracnose spots, Blossom-end Rot, Soil Rot, or any other decay or disease which cannot be removed in the ordinary process of trimming without a loss of more than 20 per cent., by weight, of the tomato in excess of that which would occur if the tomato were perfect.

(b) Sunburn or sunscald which cannot be removed in the ordinary process of trimming without a loss of more than 20 per cent., by weight, of the tomato in excess of that which would occur if the tomato were perfect.

(c) Shriveling when the flesh of the tomato is tough and rubbery.

OTHER STANDARDS

Official standard grades for the following products may be secured by writing to the Bureau of Markets, Department of Agriculture, Harrisburg, Pennsylvania:

Poultry Flocks
Hatcheries
Baby Chicks

Hatching Eggs
Dressed Turkeys
Eggs

In order to make available a supply of home grown seed and plants of superior quality, rules and regulation for the inspection of Seed Potatoes, Seed Wheat, Oats and Barley, Tomato Seed, Pepper Seed, Bramble Bushes (Raspberries and Blackberries), and fruit and other nursery stock, have been adopted by the Bureau of Plant Industry, and are applied in all cases where application is made for certification. Standard Grades for Seed Potatoes have been adopted in order to facilitate the marketing of products resulting from this certification work. These rules and regulations may be secured by writing to the Bureau of Plant Industry, Department of Agriculture, Harrisburg, Pennsylvania.

BUREAU OF MARKETS LAW
(Act of April 4, 1929, P. L. 144)

Prescribing the powers and duties of the Department of Agriculture with regard to farm products; providing for cooperation with the Department of Internal Affairs to establish standard receptacles for farm products; authorizing the Department of Agriculture to establish and promulgate standards for the grade and other classification of farm products, and to promulgate regulations for the enforcement thereof; defining farm products to include agricultural, horticultural, vegetable, fruit, and floricultural products of the soil, live stock and meats, wool, hides, poultry, eggs, dairy products, nuts, mushrooms, and honey; and providing penalties.

Section 1. That in order to promote efficient and economical methods of marketing farm products, the Department of Agriculture, under the direction of the Secretary of Agriculture, may, after investigation and public hearing, from time to time, as far as practicable, establish and promulgate standards for the grade and other classification of farm products, and, in co-operation with the Department of Internal Affairs, may establish and promulgate standards for receptacles for farm products, by which their quality, value or quantity, may be determined; and may make regulations governing the marks, brands, and labels, which may be required upon receptacles for farm products, for the purpose of showing the name and address of the producer or packer or distributor, the quantity, nature, and quality of the product, or any of them, and for the purpose of preventing deception with reference thereto. The provisions of this paragraph shall not apply to canned farm products.

Any standard for any farm product, or any standard for any receptacle for farm products, or any requirement for marking receptacles for farm products, now or hereafter made mandatory under authority of the Congress of the United States, shall forthwith, as far as applicable, be established or prescribed and promulgated by the Department as the official standard or requirement in this Commonwealth.

No standard established, or requirement for marking prescribed, under this section, shall become effective until the expiration of not less than three months after it shall have been promulgated.

Section 2. Whenever any standard for the grade or other classification of any farm product becomes ef-

fective under this act, it shall be unlawful for any person thereafter to pack for sale, offer for sale, consign for sale, or sell, any such farm product, grown, manufactured, or prepared, within this Commonwealth, under such standard grade or classification so established, or in imitation thereof, unless it conforms to such standards, subject to such variations therefrom as may be allowed in the rules and regulations made under this act, except that any such farm product may be packed, offered or consigned for sale, or sold, without conforming to the standard for the grade or other classification applicable thereto, if the product or the package containing it is not described, marked, or labeled in such a way as to indicate or to appear upon ordinary observation that the product conforms to the standard.

The department is authorized to make such rules and regulations, under this act, as may be deemed necessary to prevent deception with reference to any standards made effective under the act, except as it applies to standard receptacles for farm products.

Whenever any standard for a receptacle for a farm product becomes effective under this act, it shall be unlawful for any person thereafter to manufacture for sale or shipment, pack for sale, offer for sale, consign for sale, or sell, or ship, any receptacle, either filled or unfilled, to which the standard is applicable, unless the receptacle conform to the standard, subject to such variations therefrom as may be allowed in the regulations made under this act. The Department of Agriculture, and the Department of Internal Affairs, by their joint action, are authorized to make such rules and regulations, under this act, as may be deemed necessary to enforce the provisions of this section relating to standard receptacles for farm products.

Whenever any requirement for the marking, branding, or labeling of a receptacle for a farm product becomes effective under this act, it shall be unlawful for any person thereafter to pack for sale, offer for sale, consign for sale, or sell, and deliver, any such farm product in a receptacle to which such requirement is applicable, unless the receptacle be marked, branded or labeled according to such requirement, or unless such product be brought from outside the Commonwealth and offered for sale, consigned for sale, or sold in the original package.

The department is authorized, at any time, through its agents, to cause such investigations, classifications, and tests to be made, and such certificates to be issued,

and, upon payment or tender of payment of the market value thereof, to cause such samples to be taken, as may be deemed necessary to enforce the provisions of this section.

Section 3. The department may designate any competent employee or agent of the department and, upon satisfactory evidence of competency, may license any other person to make, upon request, investigations and classifications of farm products. When any such investigation and classification is made, the employee or agent shall issue a certificate of the grade or other classification of the farm product involved.

The department is authorized to fix, assess, and collect, or cause to be collected, fees for such services, when they are performed by employees or agents of the said department. Licensed agents may charge and collect as compensation for such services only such fees as may be approved by the department.

The department may suspend or revoke any license whenever, after opportunity for a hearing has been afforded to the licensee, the department shall determine that such licensee is incompetent or has knowingly or carelessly failed to classify any farm product correctly, or has violated any provision of this act or of the regulations made hereunder. Pending investigation, the department may suspend a license temporarily without a hearing.

Section 4. Any interested party, within a reasonable time to be prescribed in the regulations made under this act, may appeal to the department from the classification of any farm product authorized under this act, and the department shall thereupon cause such investigation to be made and such tests to be applied as it may deem necessary to determine the true classification, and shall issue a finding of the grade or other classification thereof. Whenever an appeal shall be taken to the Department of Agriculture under this act, the department shall charge and assess and collect, or cause to be collected, a reasonable fee, to be fixed by said department which shall be refunded if the appeal is sustained.

Section 5. A certificate, when not superseded by a finding of the grade or other classification of any farm product issued under this act, and a certificate issued by the United States Department of Agriculture, independently or in cooperation with a cooperating agency, as to grade or other classification of any farm product when certified by the authorized agent of that department, shall be accepted in any court of this

Commonwealth as *prima facie* evidence of the truth of the statements therein contained, including the true grade or other classification of such farm product at the time of its classification.—(As amended by Act of July 28, 1941, P. L. 525.)

Section 6. All fees and other moneys collected under this act by the department and by its employes or agents in their official capacities shall be covered into the State Treasury.

Section 7. It shall be the duty of any person in this Commonwealth, engaged in marketing farm products, to prepare and submit to the department, upon request, at such regular intervals and in such form as may be prescribed, reports of the quantity and condition of any farm product held by or for such person in commercial or other storage in this Commonwealth.

Any person in this Commonwealth engaged in marketing farm products shall furnish the department, upon request, on such date or dates and in such form as may be prescribed, reports, orally or in writing, concerning the demand for and the supply, consumption, cost, value, price, sale, payment, grade, condition, period of the holding, of any farm product in storage, and any other information regarding the marketing of farm products.

The department is authorized to verify the accuracy of the reports provided for in this section, and to make the results of such investigations public.

Section 8. In carrying out the provisions of this act, the department, its employes or agents, are authorized to enter, on any business day during the usual hours of business, any storehouse, warehouse, cold-storage plant, packing house, stockyard, railroad yard, railroad car, or any other building or place, where farm products are marketed.

Section 9. In carrying out the provisions of this act, the department, or its employes or agents designated for the purpose, may require the attendance before it, or any of them, of any person from whom reports have been requested, or any employe of such person, may administer oaths to and take testimony of any such person or his employe, and may require the production by such persons or their employes of any books, records, and other documentary evidence relating to the farm product about which reports have been requested.

Section 10. The department is authorized to make and promulgate such regulations as may be necessary to carry out the provisions of this act.

Section 11. Any person violating, or failing or refusing to comply with, any of the provisions of this act, or with intent to deceive answers or reports falsely in response to any of the requirements of this act, or who wilfully interferes with the department or its employes or agents in the execution or on account of the execution of his or their duties prescribed in this act, shall be prosecuted in a summary proceeding before any alderman, magistrate, or justice of the peace, of the proper city or county, and, upon being convicted thereof, shall be punished for the first offense by a fine of not more than twenty-five dollars, and upon conviction of the second offense by a fine of not less than twenty-five dollars nor more than one hundred dollars, and upon conviction of the third and each subsequent offense by a fine of not less than one hundred dollars nor more than five hundred dollars. In default of the payment of any fine as aforesaid, any person convicted shall be sentenced to serve one day in the jail of the proper county for each dollar of the fine and costs.

Any violations of the provisions of this act relating to standard receptacles for farm products, which may be established as herein provided for, shall be prosecuted in a summary proceeding before any alderman, magistrate, or justice of the peace, of the proper city or county, by the inspectors of weights and measures of the respective cities and counties and the Department of Internal Affairs or its agents.

Section 14. The term "person", as used in this act, includes individuals, partnership associations, and corporations.

The word "department", as used in this act, means the Department of Agriculture.

"Farm product" means any agricultural, horticultural, vegetable, fruit, and floricultural product of the soil, livestock and meats, wool, hides, poultry, eggs, dairy products, nuts, mushrooms and honey.

"Marketing" includes preparing for market, transporting, storing, consigning, buying, for purposes of manufacture or sale, offering for sale, selling, soliciting consignments or receiving on consignment.

Section 12. An act, approved the ninth day of July, one thousand nine hundred and nineteen (Pamphlet Laws, eight hundred and nine), entitled "An act prescribing the powers and duties of the Bureau of Markets in the Department of Agriculture; providing for cooperation with the Bureau of Standards of the Department of Internal Affairs to establish standard re-

ceptacles for farm products and to promulgate regulations for enforcement thereof; and prescribing penalties for violations of the provisions of this act", and its amendments, is hereby repealed.

All acts or parts of acts inconsistent herewith also are repealed.

If any clause, sentence, paragraph, or part of this act, shall for any reason be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, or part thereof, directly involved in the controversy in which such judgment shall have been rendered.

FARM PRODUCE DEALERS' LICENSING ACT

(Act of May 27, 1937, P. L. 901)

For the protection of producers of farm produce; providing for the licensing, the bonding or holding collateral of and the regulation of certain dealers in farm produce, as herein defined, within this Commonwealth; conferring powers, and imposing duties on the Department of Agriculture; providing for appeals and injunctions; and prescribing penalties —(The amending Act of May 7, 1943, P. L. 204, eliminated need for a bond which was required by the original Act.)

Section 1. The following words or phases, unless the context clearly indicates otherwise, shall have the meanings ascribed to them in this section:

(a) "Dealer in farm produce" means any person, association, copartnership or corporation engaged in the business of buying, receiving, selling, exchanging, negotiating, or soliciting the sale, resale, exchange or transfer of any farm produce from the producer on consignment or on a net return basis.

(b) "Department" means the Department of Agriculture of this Commonwealth.

(c) "Farm produce" includes all agricultural, horticultural, vegetable, fruit and floriculture products of the soil; poultry, eggs, nuts, flowers, and honey, but shall not include timber products, tea, coffee, live stock, wool, milk or milk products.

(d) "Net return basis" means a purchase for sale of farm produce from a producer at an unfixed or unstated price at the time the produce is shipped

from the point of origin, and it shall include all purchases made "at the market price," and on similar terms, which indicate that the buyer is the final arbiter of the price to be paid.

(e) "On consignment" means a sending, transfer or delivery of farm produce by a producer to a dealer in farm produce, for the purpose of sale upon a commission basis.

(f) "Producer" means any producer of farm produce in this Commonwealth. (As amended by Act of May 7, 1943, P. L. 204.)

Section 2. The provisions of this act shall not apply to—

(a) The sale of farm produce for cash, cash to mean settlement in full on or before delivery;

(b) Farmers who sell farm produce raised by themselves, or who, at the time of such sale, sell farm produce raised by their neighbors on behalf of such neighbors;

(c) Seeds sold at retail;

(d) Agricultural cooperative associations which market farm produce for their members.

Section 3. On and after December thirty-first, one thousand nine hundred and thirty-seven, it shall be unlawful for any dealer in farm produce to engage in business in this Commonwealth, unless he or it shall hold a license issued by the department as provided in this act.

Section 4. Every dealer in farm produce, desiring to transact business within this Commonwealth, shall annually on or before December first, file an application for such license with the department. The application shall be on a form furnished by the department, and, together with such other information as the department shall require, shall state—

(a) The kind or kinds of farm produce which the applicant proposes to handle;

(b) The full name or title of the applicant, or if the applicant be an association or copartnership, the name of each member of such association or copartnership, or if the applicant be a corporation, the name of each officer of the corporation;

(c) The names of the local agent or agents of the applicant, if any;

(d) The cities, boroughs, towns, and townships within which places of business of the applicant will be located, together with the street or mailing address of each.

Section 5. Unless the department refuses the application on one or more of the grounds hereinafter provided, it shall issue to such applicant, upon the payment of proper fees, a license entitling the applicant to conduct business as a dealer in farm produce at each place named in the application. Such license shall be in force from the date issued until and including the thirty-first day of December of the same year. The fee for such license shall be five dollars (\$5.00) for each place of business which the applicant conducts or names in the application. (As amended by Act of May 7, 1943, P. L. 204.)

Section 6. Repealed by Act of May 7, 1943, P. L. 204.)

Section 7. Every dealer in farm produce shall, on the receipt of farm produce for which payment is not made on delivery, and as he handles and disposes of the same, make and preserve for at least two years a record thereof, specifying the name and address of the producer consigning or shipping such farm produce, the date of receipt, the kind and quality of such produce, the amount of goods sold, the name and address of the purchaser, except that where sales total less than five dollars (\$5.00) in value, such sales may be made to order of "cash", the selling price thereof, and the items of expenses connected therewith. An "account sales", together with payment in settlement for said shipment, shall be mailed to the producer within forty-eight hours after the sale of such farm produce, unless otherwise agreed in writing. (As amended by Act of May 7, 1943, P. L. 204.)

Section 8. The department shall have power to investigate upon complaint, in such form as it may require, of an interested person or upon its own initiative, the record of any applicant or licensee, or any transaction involving the solicitation, receipt, sale or attempted sale of farm produce, the failure to make proper and true accounts and settlements at prompt and regular intervals, the making of false statements as to condition, quality or quantity of goods received or while in storage, the making of false statements as to market conditions with intent to deceive, or the failure to make payment for goods received, or other alleged injurious transactions. For such purposes the department may examine, at the place or places of business of the applicant or licensee, his ledgers, books of accounts, memoranda, and other documents which relate to the transaction involved, and may take testimony thereon under oath.

Section 9. The department may decline to grant a license or may suspend or revoke a license already granted if it is satisfied that the applicant or licensee has either—

- (1) Suffered a money judgment to be entered against him upon which execution has been returned unsatisfied; or
- (2) Made false charges for handling or services rendered; or
- (3) Failed to account promptly and properly, or to make settlements with any producer; or
- (4) Made any false statement or statements as to condition, quality or quantity of goods received or held for sale when he could have ascertained the true condition, quality or quantity by reasonable inspection; or
- (5) Made any false or misleading statement or statements as to market conditions or service rendered; or
- (6) Been guilty of a fraud in the application for or the procurement or the renewal of a license; or
- (7) Directly or indirectly purchased farm produce received on consignment or on a net return basis for his own account, without prior authority, from the producer, consigning the same, or without notifying such producer. (As amended by Act of May 7, 1943, P. L. 204.)

Section 10. Before the department shall refuse, suspend or revoke any license it shall give ten days' notice, by registered mail, to the applicant or licensee of a time and place of hearing. At such hearing the applicant or licensee shall be privileged to appear in person or by or with counsel and to produce witnesses. If the department shall find the applicant or licensee shall have been guilty of any of the acts provided in section nine of this act, the department may refuse, suspend or revoke such license, and shall give immediate notice of its action to the applicant or licensee.

Section 11. Any applicant or licensee aggrieved by any decision of the department, shall have the right of appeal therefrom, within thirty days from the date of notice, to the court of common pleas of Dauphin County.

From a decision of the court of common pleas of Dauphin County an appeal may be taken by either party to the Superior or Supreme Court of Pennsylvania, as in other cases.

No appeal shall act as a supersedeas, but pending final disposition of an appeal under this section, the department may, for special cause shown, grant, in writing, temporary permission, revocable at any time

and subject to such terms and conditions as the department may prescribe, to transact business as a dealer in farm produce, but unless such permission be granted, any applicant to whom a license has been refused, and any licensee whose license has been revoked by the department, who shall do business as a dealer in farm produce, shall be liable therefor to the same extent as if no application had been filed.

Section 12. Any dealer in farm produce violating the provisions of section three of this act, or interfering with an agent of the department in the enforcement of this act, shall for the first offense, upon conviction in a summary proceeding, be sentenced to pay a fine of not less than fifty dollars (\$50.00) nor more than three hundred dollars (\$300.00) and costs of prosecution, and in default of payment of such fine and costs, shall be sentenced to undergo imprisonment in the county jail for a period not exceeding sixty (60) days, and for a second or subsequent offense shall be guilty of a misdemeanor and shall, upon conviction thereof, be sentenced to pay a fine of not less than five hundred dollars (\$500.00) nor more than one thousand dollars (\$1,000), or to undergo imprisonment not exceeding one year, or both, in the discretion of the court.—(As amended by Act of May 7, 1943, P. L. 204.)

Section 13. The Attorney General, at the request of the department, may, in the name of the Commonwealth, institute proceedings in equity in the court of common pleas of Dauphin County for the purpose of enjoining the conduct of business in this Commonwealth contrary to the provisions of this act, and for such purpose jurisdiction is hereby conferred upon said court. In such case the Attorney General shall not be required to give bond.

Section 14. The department shall enforce and shall adopt, rules, and regulations deemed necessary to carry out the provisions of this act.

Section 15. All moneys received from license fees and fines shall be immediately paid by the department into the State Treasury, through the Department of Revenue, and credited to the General Fund.

Section 16. The provisions of this act shall be severable, and if any of its provisions shall be held to be unconstitutional, the decision of the court shall not affect the validity of the remaining provisions of this act. It is hereby declared as the legislative intent that this act would have been adopted had such unconstitutional provision not been included therein.

**LEGAL BUSHEL WEIGHTS OF AGRICULTURAL
COMMODITIES IN PENNSYLVANIA**

Fruits	Pounds per Bushel
Apples	45
Apples, dried	25
Cherries, with stems	56
Cherries, stemmed	64
Cranberries	32
Currants	40
Gooseberries	40
Grapes	48
Peaches	48
Peaches, dried (peeled)	38
Peaches, dried (unpeeled)	33
Pears	50
Plums	64
Quinces	48
Raspberries	48
Strawberries	48
 Vegetables	
Beans, dried	60
Beans, castor (shelled)	46
Beets	56
Cabbage	50
Carrots	50
Cucumbers	48
Horseradish	50
Onions	50
Onion sets	28
Parsnips	50
Peas, green (unshelled)	28
Peas, dried	60
Potatoes	60
Potatoes, sweet	54
Rutabagas	60
Spinach	12
Tomatoes	56
Turnips	56
 Grains and Grain Feeds	
Barley	48
Bran	20
Buckwheat	48
Corn, shelled	56
Corn, ear (husked)	70
Corn meal	50
Hominy	60

	Pounds per Bushel
Malt	38
Oats	32
Rice, rough	45
Rye	56
Rye meal	50
Shorts	20
Spelt	40
Wheat	60
 Grasses, Forage, etc.	
Alfalfa seed	60
Blue grass seed	14
Broom corn seed	50
Clover seed	60
Flax seed	56
Hemp seed	44
Herd's grass	45
Hungarian grass seed	50
Kaffir corn	56
Lentils	60
Linseed	56
Millet	50
Orchard grass seed	14
Rape seed	50
Redtop grass seed	14
Sorghum seed	50
Timothy grass seed	45
 Nuts	
Chestnuts, hulled	50
Hickory nuts	50
Peanuts	22
Walnuts, common	50

PENNSYLVANIA QUALITY LABEL

The label reproduced on the cover of this booklet is designed for the use of producers in identifying their products as being packed in accordance with official standards. It may be used in the form of printed labels or stenciled on sacks for potatoes and other products.

It is not intended to supersede any private brands or labels, and is to be used alone or in conjunction with such private marks as producers may have adopted.

Application may be made to the Bureau of Markets for its use as indicated as follows:

**Agreement for Use of Pennsylvania Quality
Farm Products Label**

This Agreement, made this day of by the Bureau of Markets, Pennsylvania Department of Agriculture, hereinafter called the Bureau, and of Pennsylvania, a grower or packer of Pennsylvania farm products, hereinafter called the Packer, witnesseth:

1. The Packer hereby applies to the Bureau for permission to use the Pennsylvania Quality Farm Products Label, containing the trademark registered by the Pennsylvania Department of Agriculture, on Pennsylvania grown farm products packed by him and makes application for an official registry number.
2. The Packer agrees that he will use this label only on farm products which comply with the standards for the official grade designated on the label and further agrees not to use the label on any packages of farm products, the contents of which are of lower grade than the standards specified for the grade designated on said label.

3. The Packer agrees that he will use the Pennsylvania Quality Farm Products Label with his registry number thereon, only on farm products exclusively packed by him.

4. The Packer further agrees that all orders for the Pennsylvania Quality Farm Products Label shall be submitted to and approved by the Bureau before such orders are placed with the printer.

5. The Bureau agrees to give to the Packer adequate instructions in the grading of farm products and shall advise as to the proper use of the label.

6. The Bureau agrees to maintain inspection of the products sold under the quality label at terminal markets by examining samples of such products periodically.

7. The Bureau further agrees to give all possible publicity to the Pennsylvania Quality Farm Products Label by means of articles issued by newspapers and periodicals.

8. The Packer agrees that in the event that he fails to abide with the provisions of this Agreement, to forfeit to the Bureau, all unused labels in his possession and hereby gives to the Bureau the right of entry to his premises for the purpose of confiscation of all such unused labels.

9. It is mutually agreed that in event of a breach of this Agreement by the Packer, that the Bureau shall cancel and revoke his registry number and it is further agreed, that if the Packer wilfully packs inferior grades of products under the label, in violation of Section 2 of this Agreement, the Bureau shall bring proceedings against the Packer before an alderman or justice of the peace as authorized under Section 11 of Act 148, approved April 4, 1929, for misbranding or false labeling.

In Witness Whereof, the parties have hereunto signed their names and affixed their seals, in duplicate, this day of A. D. 19.....

Bureau of Markets,
Pennsylvania Department of Agriculture,
....., Director
(SEAL) Packer

**APPEAL INSPECTION AND ISSUANCE OF
APPEAL INSPECTION CERTIFICATES
AT SHIPPING POINTS**

An appeal inspection, in case such should occur, shall be known as one made after the first certificate on the lot has been issued and where the first certificate has been found to be an incorrect report of the conditions pertaining to the product at the time the first inspection was made. In such cases another certificate will be issued to the applicant without charge. However, if the difference in the two reports is the result of changed conditions pertaining to the product, since the first inspection was made, or when the product fails to meet the grade intended at the time the first inspection is made, then the second inspection shall not be deemed an appeal inspection and a second fee shall be due from the applicant, that is, where either a loaded car has remained on the track overnight and the contents have been subjected to freezing or a lot has been prepared contrary to the grade desired.

**APPEAL INSPECTIONS AT RECEIVING
MARKETS**

When a car of produce which has been inspected at shipping point and certified as to grade is rejected in a terminal market, the following points should be borne in mind:

1. The joint state and federal certificate is PRIMA FACIE evidence in all courts of the United States of the truth therein contained.

2. The burden of proof that the stock is not of the grade certified to at point of origin rests with the receiver.

3. Rules and Regulations governing the Food Products Inspection Law provide that whenever any financially interested party is dissatisfied with the findings of the original inspection he may, by complying with certain provisions, request an appeal inspection.

4. When such appeal inspection reverses the original inspection certificate no charge is made the applicant for the services. If, however, the appeal inspection confirms the original inspection, a fee of double the regular fee is charged.

5. An inspection for condition only may be made at the receiving point, since decay, freezing injury or other change may take place between point of origin and the receiving market. Such an inspection is not an appeal inspection and in no way affects the standing of the original certificate. Inspections for condition are desirable for the purpose of checking the responsibility for any damage occurring in transit, showing the state of maturity, or any factors affecting the condition rather than grade.

6. Where any cars are reported arriving in "bad condition", "badly decayed", etc., and doubt exists as to the receiver's contention, the shipper should wire the "Food Products Inspection Service" in the market in question, requesting inspection for "Condition" only. For this service a \$2.50 fee will be charged. Always state in your wire whether car was inspected or not at shipping point, giving the certificate number if known.

The federal inspection service maintains offices and inspectors in the important markets listed below, while an additional large number of smaller markets are reached when the time permits the inspector to leave his headquarters.

7. All wires and correspondence should be addressed to "The Food Products Inspection Service", followed by the market and address given below:

RECEIVING-POINT INSPECTION OFFICES

Albany, N. Y.—Dept. of Agriculture & Markets, State Office Bldg.

Alexandria, La.—1018 Second St.

Atlanta 3, Ga.—101 Marietta St., Room 819.

Baltimore 2, Md.—801 Appraisers' Stores Bldg.

Baton Rouge, La.—2401 State Capitol Bldg.

Boston 10, Mass.—408 Atlantic Ave., Room 725.

Buffalo 3, N. Y.—344 Federal Bldg., corner Swan and Oak Sts.

Chicago 8, Ill.—1421 South Aberdeen St., Room 307.

Cincinnati, Ohio—505 U. S. Post Office and Court House.

Cleveland 15, Ohio—Northern Ohio Food Terminal, Unit 1, Room 10, 4000 Orange Ave.

Columbia, S. C.—420 Calhoun State Office Bldg.

Columbus 15, Ohio—36 Old Federal Bldg.

Denver 2, Colo.—547 Custom House, 20th and California Sts.

Detroit 9, Mich.—25 Union Produce Terminal.

Duluth, Minn.—308 Builder's Exchange.

Fargo, N. D.—State College Station.

Fort Worth, Texas—511-513 U. S. Court House.

Harrisburg, Pa.—Bureau of Markets, 131, South Office Bldg., Capitol.

Hartford, Conn.—330 Federal Bldg., corner Church and High Sts.

Houston, Texas—305-6 Federal Office Bldg.

Indianapolis 4, Ind.—108 E. Washington St., Rooms 1206-7.

Jacksonville 1, Fla.—204 St. James Bldg.

Jackson, Miss.—State Dept. of Agriculture and Commerce, Old Capitol Bldg.

Kansas City 6, Mo.—317 U. S. Court House.

Los Angeles 21, Calif.—284 Wholesale Terminal Bldg.

Memphis 1, Tenn.—212 Custom House Bldg.

Miami 35, Fla.—2511 S. W. Sixth St.

Milwaukee 2, Wis.—637 Federal Bldg., 517 E. Wisconsin Ave.

Minneapolis 3, Minn.—302 Gorham Bldg.

Newark 2, N. J.—103 Federal Bldg., Federal Square.

New Orleans 12, La.—612 Cotton Exchange Bldg.

Norfolk 10, Va.—288 Broker's Exchange Bldg., 264.

New York 14, N. Y.—641 Washington St., Room 820.

Oklahoma City 5, Okla.—100 State Capitol Bldg.

Philadelphia 6, Pa.—604-A U. S. Custom House, 2nd and Chestnut Sts.

Phoenix, Ariz.—610 Security Bldg.

Pittsburgh 22, Pa.—501 Bessemer Bldg., 6th and Duquesne Way.
 Portland 5, Ore.—312-A U. S. Court House, S. W. Broadway & Main Sts.
 Providence, R. I.—11 Terminal Way.
 Raleigh, N. C.—303 Agricultural Bldg., State Dept. of Agriculture.
 Richmond, Va.—1030 State Office Bldg.
 Rochester 4, N. Y.—300 Terminal Bldg., 65 Broad St.
 Sacramento 14, Calif.—Mull Bldg., Room 237, 1125 10th St.
 St. Louis, Mo.—442 Boatmen's Bank Bldg.
 Salt Lake City, Utah—416 State Capitol.
 San Diego 12, Calif.—Navy Provisions Pier, Foot of E St.
 San Francisco 5, Calif.—2 State Agriculture Bldg.
 Seattle 4, Wash.—228 Federal Office Bldg.
 Shreveport, La.—2135 Greenwood Rd.
 Tampa, Fla.—5702 Tallaferrre Ave.
 Trenton 8, N. J.—606 First Mechanics Bank Bldg.
 Vallejo, Calif.—22 Branciforte St.
 Washington 25, D. C.—2062 South Bldg., Dept. of Agriculture.

INSPECTOR'S LICENSE

No person, firm, corporation or association is permitted to issue, classify and sign certificates covering the grade of farm products when such farm products have been officially standardized, except as provided by law and only by a person properly qualified, licensed and designated as a State Inspector by the State Department of Agriculture.

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CIRCULATES

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Pa. dept. of agri.

Handbook of Pa.
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